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UNIVERSITY OF PITTSBURGH

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THE CELEBRATION OF THE

One Hundred and Twenty-Fifth Anniversary

FEBRUARY 27, 28, 29, 1912.

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UNIVERSITY OF PITTSBURGH

BULLETIN

THE CELEBRATION OF THE

One Hundred and Twenty-Fifth Anniversary

482

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Vol. 8 No. 21

University of Pittsburgh

BULLETIN

The Celebration of the One Hundred and Twenty Fifth Anniversary of the University of Pittsburgh
Feb. 27, 28, 29, 1912

HISTORY OF THE UNIVERSITY.

The history of the University of Pittsburgh is divided into three periods.

I. The Pittsburgh Academy 1787-1819.
The first charter was granted February 28, 1787.

II. The Western University of Pennsylvania, 1819-1908.
1. The College 1819-1892.
2. The University proper with College, Engineering School and Professional Schools 1892-1908.

III. 1908—
In 1908 the name was changed to University of Pittsburgh and the organization of the University completed to include:
1. The College
2. The Graduate School
3. The School of Engineering
4. The School of Mines
5. The School of Economics
6. The School of Education
7. The School of Law
8. The School of Medicine
9. The School of Dentistry
10. The School of Pharmacy
11. The School of Astronomy (Allegheny Observatory.

The Chancellors of the University.

Robert Bruce	1819-1843
Heman Dyer	1843-1849
David H. Riddle (acting)	1849-1855
John F. McLaren	1855-1858
George Woods	1858-1880
Henry M. MacCracken	1880-1884
Milton B. Goff	1884-1890
William J. Holland	1890-1900
John A. Brashear (acting)	1901-1904
Samuel Black McCormick	1904-

The present faculty of the University numbers 275.
The total enrolment for 1911-1912 is 2,222.

The growth and development of the University during this period is fully set forth in the historical address delivered by Dr. Holland during the Anniversary celebration.

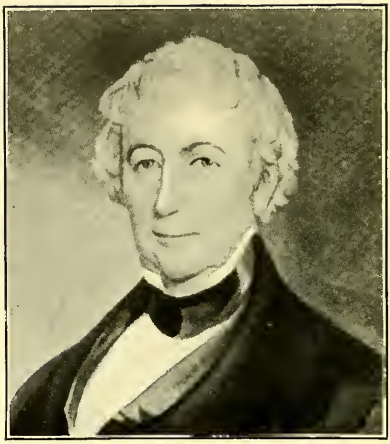
In 1908 the custom was instituted of observing February 28 as Charter Day, this being the date of the granting of the first charter to the Pittsburgh Academy, of which the University is the legal successor. For this reason, it was felt that the proper time for the celebration of the one hundred and twenty-fifth anniversary was on Charter Day. In order to give an opportunity for all the exercises appropriate for such an occasion, it was decided that the celebration should cover three days. A full account of the proceedings follows.

MONDAY, FEBRUARY 26th.

While the formal program did not begin until Tuesday morning, the students inaugurated the Anniversary exercises with a torchlight procession and bonfire on the University campus on Monday evening. The students assembled at seven o'clock in the evening at the corner of Craft Avenue and Forbes Street. The representatives of the different schools carried banners, on which the names of the schools and the classes were printed. The procession marched down Forbes Street and up the Boulevard to the University Road; and up the hill to the part of the campus above the School of Medicine. The procession was illuminated with torches of red fire, and was led by the University band. One thousand students were in the procession, and several hundred alumni met the others on the campus.

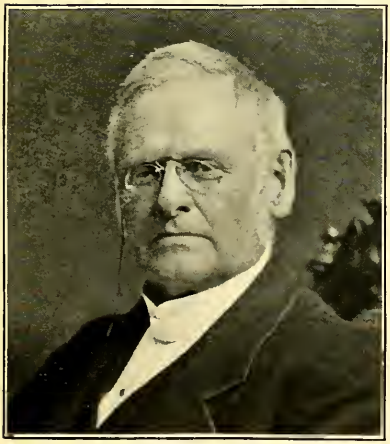
JOSEPH STOCKTON

Principal Pittsburgh Academy
1810-1819



ROBERT BRUCE

Chancellor
1819-1843

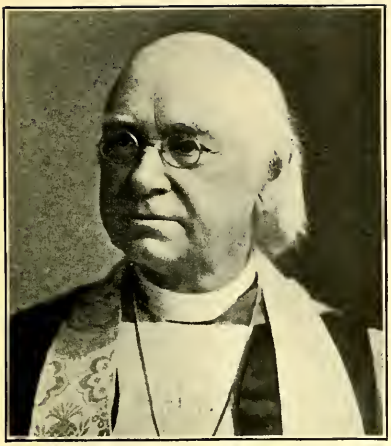


HEMAN DYER

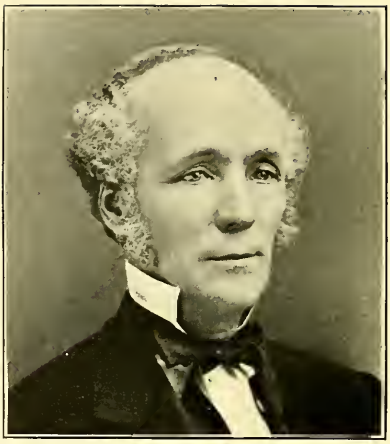
Chancellor
1843-1849

DAVID H. RIDDLE

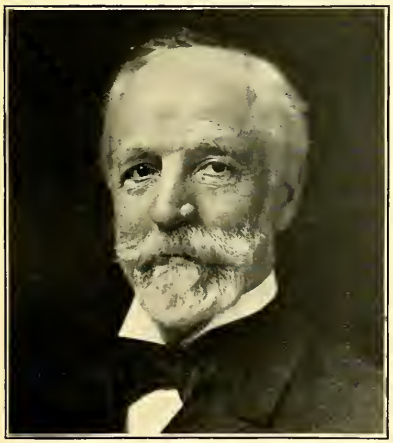
Chancellor
1849-1855



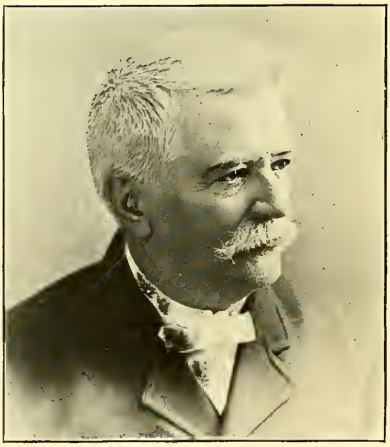
JOHN F. McLAREN
Chancellor
1855-1858



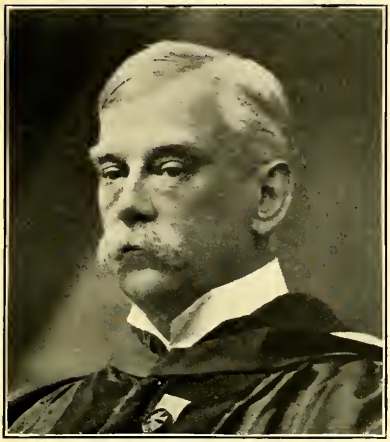
GEORGE WOODS
Chancellor
1858-1880



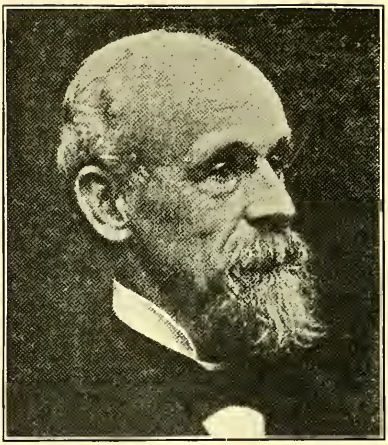
HENRY MITCHELL MacCRACKEN
Chancellor
1880-1884



MILTON B. GOFF
Chancellor
1884-1890



WILLIAM JACOB HOLLAND
Chancellor
1890-1900



JOHN ALFRED BRASHEAR
Chancellor
1901-1904

SAMUEL BLACK McCORMICK
Chancellor
1904-

The first exercise was the ceremony of burning the freshman caps, after which a snake dance was executed around the fire. The usual refreshments of cap night were then served, and after a number of University songs and selections by the band, the exercises of the evening were closed.

TUESDAY, FEBRUARY 27th.

The formal anniversary celebration began on Tuesday, February 27th. Educational conferences were held in the banquet room of the Soldiers' Memorial at ten thirty o'clock in the forenoon and at two thirty o'clock in the afternoon. The delegates to the anniversary celebration were entertained by the University at luncheon at the Hotel Schenley during the intermission between the conferences, and the exercises of the day closed with the historical play, entitled "Vision of She-Who-Knows", given by the students of the University in Carnegie Music Hall.

10:30 A. M. EDUCATIONAL CONFERENCE.

Ideals of Education.

Chancellor S. B. McCormick, Presiding.

After prayer by Rev. R. C. Wylie, of the Reformed Presbyterian Theological Seminary, Chancellor McCormick spoke as follows:

Honored Guests, Fellow Teachers and Friends of the University of Pittsburgh:

It is with feelings of very unusual pleasure that I extend to you this morning the word of welcome. Before introducing the speakers, it is fitting that I should speak briefly with reference to the University and to its history, in anticipation of the fuller sketch which will be presented on the afternoon of tomorrow.

We are assembled this morning in a city which in the earlier days of this country was the scene of events deserving perhaps a larger place in the history of the country than they have received. It was in 1758 that Fort Duquesne became Pittsburgh. It was not until about the period of the Revolutionary War that any considerable number of people settled at the points of the Allegheny and Monongahela forming the Ohio. It was perhaps about 1780 that the population began to center in upon this spot. In 1787, in which year the first

charter of the University was given, under the name of the Pittsburgh Academy, there were perhaps not more than six or eight hundred people—not more in any event than half the student body of the University today. It was a small trading post of log houses and a few stores. To me it is a most remarkable thing that these few people, situated as they were, thought enough of higher education to secure, through the Hon. H. H. Brackenridge, a charter for an academy at this point.

In session at that time in Philadelphia were not only the Legislature of Pennsylvania but also the Congress of the United States and the Constitutional Convention which later brought into being the Constitution of the United States. It was therefore an historic period which gave birth to this new institution of learning in the far west.

Interest in educational matters was alive all over this western part of Pennsylvania. Some of the original incorporators of this Academy were also incorporators of Washington and Jefferson Academies, which later became colleges in Washington and in Canonsburg, and which later still merged into Washington and Jefferson College. When Dr. Stockton came to Pittsburgh in 1810 to take charge of the Pittsburgh Academy, he came from the Academy at Meadville, which is now Allegheny College. I mention these things to indicate to you that in that early day among the Scotch-Irish and the other peoples that settled Western Pennsylvania there was a genuine and a universal interest in the higher education of youth. The incorporation of the Pittsburgh Academy antedated only a few months that of Jefferson Academy, and was the first institution of learning west of the mountains to receive a charter, except Nashville, which we believe was incorporated in 1785.

The second charter of this institution was granted in 1819 and was simply an enlargement of the first, the work of the school having advanced so greatly as to require a larger curriculum. The institution was now called the Western University of Pennsylvania, the avowed purpose being to organize an institution that should do for this western part of the State the work which the University of Pennsylvania was doing in the east. The name was not the University of Western Pennsylvania, but the University of Pennsylvania, the western one. Reference to the publications of the University in those early years indicates that the University located in Pittsburgh was

to be as nearly as possible a duplicate of the University of Pennsylvania in the east.

For many years the new University, under the second charter, did only college work. Attempts were made from time to time to enlarge the scope of the work, but they were not fully successful. For instance, in 1840 a Law School was organized under the deanship of Hon. Walter H. Lowrie, and this school flourished until the second fire in 1849. A department of Engineering was formed, graduating the first student in 1846. Other efforts were made, especially in Science and in Medicine. In 1866 the Allegheny Observatory became a part of the University, and under Langley, Keeler, and others, brought the University into great prominence. It was only, however, under the Chancellorship of Dr. Holland, that full university work was undertaken and continued. From 1892 until 1895 schools of Medicine, Law, Dentistry and Pharmacy were organized. At the present time the University consists of eleven schools: the School of Liberal Arts, known as the College; the Schools of Engineering, of Mines, of Economics, and of Education,—these forming the undergraduate part of the University. The other schools are the Graduate School, the School of Astronomy, and the four professional schools, Medicine, Law, Dentistry, and Pharmacy. These eleven schools have at the present time something over two thousand students.

I wish furthermore to say in these introductory words that the University until almost the present time has been scattered over different parts of the city. It was only four years ago that the site which we now occupy became the property of the University. This consists of a tract of forty-three acres. A competition of over sixty architects resulted in the building plans for the University. Building operations began shortly after and have since been carried on as rapidly as possible, with the practical completion of five of these buildings, to wit: Mines, Engineering, Medicine, Dentistry, and Gymnasium. You are able to see all of these excepting the Gymnasium, which is over the hill and can only be seen by those who are willing to climb to the top, an undertaking which will splendidly justify the energy expended, since the view out over the eastern part of the city and over the Park is really superb.

You already have seen the institutions in close proximity to the University, namely, the Twentieth Century Club, the Armory, the German Turnverein, the University Club, the

Athletic Club, the Hotel Schenley, Forbes Field, where the National League baseball, as well as our own football games are played, the magnificent Carnegie Institute, with its Library, Art and Museum, the splendid Technical Schools, the Phipps Conservatories, and this most beautiful structure in which our Anniversary meetings are held, the Soldiers and Sailors Memorial, a building which not only adds to the architectural beauty of Pittsburgh, but is also a fine tribute to the patriotism of our people. We are in the midst of all these, and we hope to develop here in this heart of Pittsburgh a set of institutions that will make our city as famous for Education, Art, Music and Beauty as it is already famous for its manufacturing, its banking, and its other industrial pursuits.

For the University, therefore, speaking on behalf of the Trustees, the Faculty, the students, and the alumni, I welcome you here this morning, and express the hope that your stay will be very pleasant to you, as we are sure it will be very pleasant and profitable to us. The program for this morning and for this afternoon will, we think, be beneficial to every person who hears the papers and participates in the discussions. Tomorrow, in the large room below, the Anniversary Program proper will be given with an address on the History of Higher Education in the forenoon, an historical sketch in the afternoon, and the alumni banquet in the evening. The third day we shall have the meeting of the College Presidents of the Commonwealth of Pennsylvania, and of the secondary schools of Western Pennsylvania, in separate and in joint sessions, closing with the entertainment in the auditorium of this building in the evening. This evening we have the historical play, "The Vision of She-Who-Knows", which we hope will be attended not only by our delegates, representatives of other institutions, but also by large numbers of the people of our city. To all these we give you a genuine and a hearty welcome.

Chancellor McCormick then introduced the speakers, whose addresses follow:

The Ideal of Culture.

Asa Henry Morton, Professor of Natural Theology, Williams College.

Mr. Chancellor:

It is well to open your program with ideals. No further proof is asked that the University of Pittsburgh

has neither lost the tradition nor apostatized from the faith of its forebears. Had the men who founded academies and colleges not been idealists, those academies and colleges would not have been founded. Had their successors not been idealists, their flesh and their heart had failed them. Had they not been practical, there would be no celebration today.

Since all successful educational administrators are practical idealists, and all successful educational institutions the embodiment of practical idealism, it is fitting that every educational conference should discuss both practice and ideals. After centuries of education you think it still worth while to meet and debate questions of organization and method. Be as practical as you will, those questions are never settled once for all. Were your ideals fixed,—conditions are not—and methods must be altered. But ideals are not exempt. We talk of the needle and the polar star; but they are not to be unduly trusted, else we find ourselves off our course. Human nature may not have varied widely in essentials—we can still read, understand and apply the maxims of wise men who lived in the dawn of history; nor are we yet so far from the animal that Aesop's fables are obsolete. Still, Darwin gave the fatal blow to ancestor-worship. His ideas might have pleased tribes still in the totem-stage, but he has forever limited the ambitions of heraldry. When we have gained the courage of democracy, we discard that feudal and pseudo-feudal price. When we have gained the courage of science in facing truth, we reverence not only our lowly human ancestors, but those progenitors more lowly still, who fought a good fight against terrible odds, and whose works do follow them even unto this day. Reverence for ancestors, no matter how remote, will prevail until we ourselves degenerate, and when that time comes, our days will not be long in the land. Reverence for ancestors includes reverence for their ideals. We cannot accept those ideals unchanged; that would be ancestor worship, and stop our journey further from the totem. Where ancestor worship has prevailed no doctrine of the future state has greatly kindled the imagination of poet or of seer. But neither can the ideals of the fathers be rejected. If the past was all wrong, how can the future be at all right? No tradition, no faith; no faith, no future.

The four subjects assigned to this morning's session represent the traditional ideals of education, its four cardinal virtues. We must not take them too easily for granted. In

their traditional meaning they are far from finding universal acceptance. Few would deny them all—how many will accept them all? Each has its peculiar foes. Each is essential to the other three, if the traditional education is to abide. If the traditional education is to adjust itself to the present, each must be defined anew. None demands a new definition more urgently than the ideal of culture.

This is admitted, and efforts have been made. There is no time to review them here, and for this audience no need. From Matthew Arnold to President Eliot, definition and description have sought to fix an ideal for us. Progress has been made, but a working agreement not yet reached. Meanwhile we are muddling along and may muddle through, but until our ideal becomes less nebulous by day and more luminous by night, what Moses can lure this hard-headed generation with promises of cultural milk and honey? The humanistic ideal has widened its own realm to include many races and their higher products in art and literature. History and anthropology have extended it around the world and back to the savage. Science adds the animal world—the microscopic world of life—the material universe out into space and into the infinitesimal. Who shall say what is important and what is not? The mosquito, the fly and the microbe have recently inverted values. We do not mind the camel, but we strain at the germ-bearing gnat. We are hearing no complaints that our ideal of culture is small or narrow—wider than man can compass—higher than heaven and deeper than hell,—multiplicity beyond all hopes of conquest—what shall the individual do? Are all subjects of equal cultural value when properly handled, or are some peculiarly fitted to develop man? What inspired council shall fix the canon of the curriculum? Who shall choose the mental and moral staples on which our students shall feed? Shall we choose the practical? How widely shall we conceive the practical? Fortunate it is for us that the decision of such theoretical questions does not depend on reason alone! Common sense and human nature and finance are wholesome checks to the visionary. Nor is tradition useless—the diverging roads continue in the main the ancient trend—and the angles of divergence are not so great as our prophetic fears imagine.

Our ideal of the cultivated man has changed. It must change still more. In the hope of contributing something towards harmony and agreement, I venture to suggest that we must give up the notion of an ideal type of the cultured man.

In his address before the National Educational Association at Boston in 1903, President Eliot gave up the notion of an ideal type of culture based on specially chosen subjects. But he held to the notion of the typical cultivated man; illustrating his meaning from Sir Joshua Reynolds (and he might have gone back further), who said that the artist sees no perfect specimen in nature, but combines fragments of perfection scattered in nature into a perfect artistic unity. Few modern artists would subscribe to that older fancy. The great sculptor Rodin repudiates it with vigorous scorn as responsible for the host of weak and anemic productions neutral, negative, or mawkish. The whole modern revolt against academic inanity to wholesome virility and robustness is the revolt against such conceptions of the ideal. The prevailing conception is that adopted by the philosopher Bergson, that the artist sees more of *reality* than the ordinary man, who looks at it with a practical eye and sees chiefly what affects his interests. The difference is not between the reality of life, grasped only by the practical man, and unreal visions or fancies of a dreamer. The difference is between two visions of *reality*. There is a further difference, —a difference in *value*. The practical man and the artist value different aspects of reality, or value differently the same aspect. Does this not give us our clue? The cultivated man gets a different grip on reality from the man who is not cultivated, and his values measure to a different standard. He is a realist, but his valuations of reality are ideal. They are in terms of direct enjoyment as well as of use and profit. They give him the ends of life as he lives, without postponement to that imaginary and visionary period of the so-called practical man who expects some day to retire and enjoy, but loses meanwhile the power of enjoyment. The cultivated man knows what to sacrifice and when. His perspective of life is truer. He knows how to live, in the present and for the future, and he has life more abundantly. Rich and full is his life. No man can see life whole, but the cultivated man takes in a larger section. Such men grew out of the scantier soil of the older culture, and varieties of cultivated men grew from the same soil, as do maples and elms. Today we must expect from more-varied soil still greater variety—and different species,—and the new species deserve a welcome. The true humanist will not insist on a single species or a single genus of cultivated humanity. He will not confine the term liberal education to the kind producing that genus. Modern civilization produces uni-

formity enough. Give it a chance to produce its compensating diversity! Why set up an ideal type, only to lament shortcomings? If the gods granted us our ideal type we might ask them to take him back again! We forget that human types are subjects of comedy and parody—nobler creations are not typical. The higher man develops, the more unique he becomes. Liberal culture does not conform to patterns; it frees from them; because it is liberal, it liberates. Science can produce the cultivated man, but not unless science is treated humanistically. Scientific method alone will not. Scientific method rules out the personal equation in search of objective truth. Culture enhances the personal equation in search of life. The older humanistic studies lost their *specific* cultural value if pursued only in the scientific spirit, for culture deals pre-eminently with values. Science makes culture possible; culture makes science worth while. The universal interpenetration of all our studies, in spite of specialization—to some degree because of specialization—is making science philosophical, and is leading philosophy to include within its realm, not only the rational, but the irrational,—all that immense realm of reality refractory to analysis, but known directly by intuition and living experience. This is the special realm of religion, of the esthetic, of values, of culture. It is elusive to reason, but to man's higher nature it is the supremely real. Reason and science deal with relations, abstractions. This is the concrete; apprehended immediately, if at all. For true culture, then, the reason must be cultivated, but so must the emotions, the intuitions, the spiritual discernment of spiritual things. The universe, man, and their relations,—the history of the universe and of man,—the products of the universe and of man,—the value of it all to man,—with a suggestion of prophecy as to the value of man in the universe. There are, then, staples of education, essential to vital nutriment; but the list is far larger than it was,—and the quality may yet be improved. Religion must come back into the curriculum in the form of history and philosophy. The more insistence that it is a human product—the less excuse for excluding it. In France it has already returned with lay instructors, and even their school of sociology has courses on the origins of religion and the idea of God. Religion is essential to culture—devotion must be left to the individual.

The application of all this to education will be guided by traditional lines. In the school and in the university culture in the higher sense is of course present and cannot be excluded,—

though less directly aimed at than in college. There seems to be no adequate reason why the university post-graduate courses should banish the atmosphere of culture. In all earnest work technic passes into the first place—even in the schools of art and music. But why should the students scorn for themselves the culture their work is to bring to others? Why refuse to wear what they weave? Why care only for discovery on the frontiers, and not for the civilization that follows in the wake of the pioneer? There is in this a good deal of perversity and pose. Is thought less earnest for letting the sunset glow shine through it? Or is technic less sincere for the flush of spiritual emotion? No need to fear weak sentiment except from the weakly sentimental, and nothing can stop them. We may have to cease using the word *culture* because of its vapid associations. Culture itself is power and virility, the qualities most lacking today in all our arts of expression. A so-called "soft" culture-course is not a true culture-course at all. It is a course in cultural anaesthetics. It is well known that the general courses in any subject are the hardest to give; they require a master for the command of fact, philosophy, and fitting phrase. Such masters are appearing more frequently now in descriptive summaries and philosophic essays—and the omen is good. We may hope for more similar courses in the University. The philosophy of each science is a part of that science, and should be treated by an expert trained in both science and philosophy.

The problem of the college is the most serious and the most difficult. We seem to inoculate many of the students with just enough diluted serum of culture to render them immune for the remainder of their days; and our large graduate clubs have tended to become strongholds of the Philistines, where it is bad form to discuss things intellectual and spiritual. The main fight for the true ideals of culture in education must be fought out in the college. We are counseled on the one hand to go back to subjects bearing more directly on practical life in the narrower sense, and on the other hand to accept the inevitable and metamorphose gently into the country club, teaching like the philosophers of the Academy and the Lyceum in Athens, in the interval of gymnastic exercises—to such youths as will listen. The example is alluring, but there no degrees were given. There is a demand for such colleges,—let such colleges as will, consent to supply it. But there is a sturdier and nobler ideal; it is the ideal of the old-fashioned

college, familiar to you all—where the recreation was taken outside the classroom instead of in it, and where students, with all their old-fashioned faults and vices, had certain virtues of intellectual seriousness and care for intellectual things. That ideal can be applied today if we have the stamina to apply it; and there are American boys who will respond to it when it commands their respect,—when they see that culture in culture courses as well as in courses where culture is the atmosphere rather than the subject,—austerity is the true joy. There are more passive delights of literature and art which rest, refresh and invigorate. They are healthful recreation, and not to be excluded. There may even be such courses if balanced by correlated reading and theses—such as fit for enjoyment. All courses should be enjoyable in this way to some degree. But anything that brings the world *culture* into disrepute is suicidal for the college. If it ceases to be an institution for true and virile culture it ceases to be a college.

The increasing complexity of knowledge and of civilization has complicated our curricula. We have been trying to teach pretty nearly every thing worth knowing. Not only must the individual choose his own limitations, but so must the college and the university. There is much to be said for a return to the old required course in a form suited to our day—either as groups within the college or as specialized college under the same administration. If each group or each college will choose its curriculum and balance it so that it will be both efficient and cultural, we need not fear the results. We shall gather grapes of one and figs of another. But we must somehow rescue ourselves from this chaos of courses, and the pressure of campus activities that leaves no time for thoroughness or reflection. We must not hesitate to simplify our collegiate curriculum. The complexity of civilization furnishes its own remedy, by providing for many cultural influences outside this college. We cannot do everything; the home and society must work with us; and we must have time. We cannot be hurried. Culture is a ripening process. The papers have just stated that the growth of plants is being forced not only by electric light at night, but by administering chloroform during their periods of rest, so that they will rest twice as fast, and get through with it sooner. This may explain the mysterious value of some of our culture courses. We must gain time even if it is by intensifying rest. But there is no doubt that adequate time must be given at each stage for the needs of that

stage—for assimilation, growth, ripening. We are learning from the new philosophy that without time there is no free will—and the aim of liberalizing education is to cultivate free will.

Let us admit that our ideal of culture and of the cultivated man has changed and will change yet more. Let us give up the notion of *the* cultivated man, and be content with *a* cultivated man, upon whatever meat he may feed. We shall not fall into anarchy; not only will tradition steady us, but human nature has its eternal checks and balances; while boy nature is immortally boy nature. In giving up the goal of a fixed ideal, we do not give up the essential—we refuse to be bound by the accidental.

The Ideal of Scholarship.*

Paul Shorey, Professor of Greek, University of Chicago.

Mr. Chancellor, Ladies and Gentlemen:—

The religions of the ancient peoples were polytheistic. They worshiped many departmental deities. But when in their Vedic or Orphic hymns they undertook the celebration of one of their deities and poured themselves forth effusively in his praises, their religious emotion was such that they used every adjective and every epithet that belonged to all their other deities. And that mixed the departments. The god of war was allowed to cast the thunderbolt when he was praised, and the god of love, as the French say, *faire la pluie bouillir.*

This phenomenon has engaged the attention of students in history and religion and has been denominated by the pedantic as henotheism. Now that doctrine of henotheism is of eternal application. It applies to that modern form of polytheistic judgment which we go through with on platforms like this when we rise to sing or chant those Orphic or Vedic hymns to our departmental deities of culture or science or philosophy or those that are the other particular subjects which we may represent. In all such cases while we are speaking of one ideal, this henotheistic rhetoric, if I may employ the term, leads us on to enlarge our ideal, to extend it in every direction,

*Note.—Copy for this address was obtained from the notes of the stenographer who reported the proceedings of the Anniversary. Owing to lack of time, Dr. Shorey was unable to revise the manuscript.

to associate it with all the other ideals, to inflate our little balloon until it loses its way in the infinite azure of heaven and becomes identical with Plato's one good and true and beautiful, at which time of maximum extension and minimum intension it attains to the zenith of its efforts of oratory and the nadir of its significance for rational thought.

Now, for example, one of the most distinguished of American philosophers has taken the single word loyalty and used it as a bank check for drawing out the entire cash balance of the bank of idealism. Another, a distinguished professor of pedagogy, in his eagerness to insist on the ideal of efficiency, has declared that the end and aim of all true education is to make the individual the master of the world—surely a large order for any system of education, however ideal.

Now I am tempted to embark on this path, and I am tempted to begin by trying to show that the ideal that I present, that of scholarship, is closely involved with the ideal that seems most remote from it, that of efficiency. The temptation befalls us especially in speaking of education, because in education we are always really thinking of the ideal man. We wish our system of education to form its ideal man, and the ideal man should have no inefficiencies and no imperfections. And so I am tempted, as I say, to show that the ideal of scholarship involves the ideal of efficiency. Of course you would have to grant a very large exception.

On this university platform we evidently are not speaking of the common school education of the great masses. That is perhaps a more important problem than any we have to discuss here, but it is not our problem at present. It is very probable that the common school education of the great masses should be directed to efficiency in the very narrowest and most technical sense of the word, to help them to earn their living. I do not know. It is not the problem that we have to study. It may be that in the education of the masses proper we need less culture, less of what is commonly called culture, and more vocational training, more manual training, more practical things in the obvious and utilitarian sense of the word. Again I do not know. I neither affirm nor deny. It may be that Mr. Booker Washington is right when he broadly tells his people that it is wrong for them to devote so much time to the study of Latin and that they ought rather to devote themselves to industrial and agricultural pursuits. I cannot say. It could well seem that a population of nine or ten millions could afford a little culture

to and among a few leaders. But that is not my province. It may be that certain individuals who write for the magazines are correct when they say that very many young women are studying Greek who ought to be cooking. I do not know. But it must be an extremely efficient young woman who, after beginning cooking in the kindergarten, pursues it in the graded schools, spends four years in the high school, four years in college and three years in the graduate school, upon that recondite subject.

However, saving this question of the great masses of our population for whom possibly the inducement demanded of life may be determined, it may be that they are in the position of that old darky who, when she was asked why she did not learn to write, said, "Fo' de Lawd, Missey, I hasn't de time to contribute. I'se too busy livin' ". That may be the condition of the masses of our population. But we are to waive that question. We are dealing with that limited number, proportionately small, perhaps, but in a population of a hundred millions numerically large, who do not have the time for more, who wish more, who go to the high school and some of whom go on to the college and graduate school, and anything we say about education here applies to that class and not to the other.

And now, limiting ourselves to that class, I think I could, if I had time, make a very good case for the identification of the ideals of scholarship with that of efficiency. But that is not the subject on which I intend to speak. My observation is that our business men do not complain that the graduates of our high schools and colleges have not learned this or that technicality of their future trades or professions. They are complained about that they have not learned the very things that high schools and colleges profess to teach, that they cannot write a correct letter or spell correctly, or that they have not acquired the habits of accuracy and industry and faithful, disciplined intellectual work that the colleges and high schools might give. And these things are precisely what the ideal of scholarship means, to anticipate the thing. It means accuracy, precision, weight, sincerity and soundness of work in whatever you do undertake. So that in that line also I might, if I wanted to, practice that rhetorical henotheism with which I began, that the ideal of scholarship is identical with the ideal of efficiency for the class to which it applies.

But that is not the essential theme. The essential theme is to bring an ideal of scholarship in its relations to the ideal of

culture. It is culture and scholarship, and defined most simply not by any abstract and ideal definition but with a very plain fact, that they both have to do with literature, history, art, language and similar studies. I know of course that there has been a great protest and an attempt to define culture so as to make it include chemistry and physics. That simply destroys a convenient distinction and does not profit chemistry and physics in the least.

Culture, as I see it, is most easily defined by the fact that it deals with language, literature, history and art and similar studies, and so does scholarship. Now the easiest way, the most effective way before an audience, to deal with these two ideals is simply to confound and identify. That is what Emerson did in the great Phi Beta Kappa address on The American Scholar. It is what has been done in hundreds and thousands of Phi Beta Kappa addresses, in one only a day or two ago. Again you confound useful distinctions and gain nothing. Emerson defined the school as man thinking. The scholar has to be the delegated thinker of the community. That sounds well from the platform. But it is demanding altogether too much, and no one really believes it. That I think is only a platform definition of the scholar or of the cultured man. How far Emerson is from our particular conception appears from the fact that he has no conception throughout his speaking of any difference between the scholar, technically, and the man of culture; and that appears from the fact that he says the chief scholar in a community is its clergyman, which has absolutely no bearing on our present condition, with our professional graduate schools.

It is not then the identification of scholarship and culture that will serve us. We must define it a little more closely. Not, again, by any abstract definition, but by the simple fact that they approach this subject they have in common in different ways. Culture aims rather at the human interest in language, literature, history and the rest. It seeks to enjoy this human interest in a sober, passive, recipient attitude, the refinement of feeling, the enlargement of sympathy, and possibly the polish of the faculties of expression. Then it is those studies which, pursued, give or tend to give the thing which scholarship in its occupation with these studies is concerned primarily with, acquisition of—not truth, which is a meaningless word, but with the precise truth in regard to the particular question in hand.

And it means such discipline and enlargement of all the interest faculties as honest and sincere pursuit brings. That is the essential difference between scholarship and culture.

Now the two are interdependent; interdependent in any great university worthy of the name, interdependent in any civilization worthy of the name, interdependent in the larger and higher spiritual and intellectual life of any nation that lives any life above the mere material. And though sometimes unnecessarily, perhaps, divorced in the particular schools, the particular classroom, and still more in the individual life, and when there is a tendency to uphold one above the other, then for which should a leader of public opinion speak, for which should one who is not a leader of public opinion, but who has occasionally the opportunity of getting the ear of an audience, for which should he speak his word? Obviously he should speak for the one that is most likely to be neglected under present conditions, the one that is most likely to be unworthily disparaged, the one that is least likely to receive its due recognition unless it is supported and encouraged by the careful and serious thought and the sincere thought of those who know. And I think that under our present conditions it is the ideal of scholarship and not the ideal even of culture that needs that support from serious thinkers.

The reasons are very obvious. Let us grant that the great mass of our population feels no very deep interest in either the ideal of scholarship or the ideal of culture, that it is, as we have said, occupied wholly in living: there nevertheless is a great mass of those who receive a secondary and college education, a great mass of lecture goers and meeting goers and magazine readers who have a certain kind of interest in the ideal of culture, an unformed apprehension of it but still an apprehension; who are interested in literature, language and history for their human significance if for nothing else; who are completely blind and deaf to the ideal of scholarship. And in this large secondary class I think we must include the majority of our high school boys and girls and even of our colleges proper. They, too, will never consent to devote themselves wholly to practical studies, they never will consent to devote themselves wholly to the physical sciences. They feel an instinctive need for something of the nature of linguistic, literary and historical studies, to thus feel the impulse and to take it in the attitude of passive enjoyment, the attitude of the lecture goer. And they judge their teachers very largely as

they judge a Chautauqua lecturer on the platform, by his power to hold the attention and the interest of an audience that has not prepared the lesson and that does not feel a real and genuine interest in the subject matter, at least in the actual truth of the subject matter, but cares simply for its sympathetic or broad and vague human interest. That, I say, is why our students are tempted to receive scholarship in the form of culture; that is their attitude toward their instruction and their teachers. And in this they are encouraged on all sides. They are encouraged in the first place by the great mass of popular writers whose mission it is to diffuse this kind of culture; they are encouraged by too many high school and college teachers and professors whose loud-voiced proclamations to culture are merely the external and audible sign of their internal detestation of the exacting standards and severe tests of real scholarship. And our students are also encouraged in that attitude by the impartial philanthropists who would gladly occupy the entire brains and attention and efforts of the rising generation in holding him to the leader of the submerged tenth. And they are also encouraged by the professors of pedagogy who would like to substitute for knowledge of the thing taught their theory of teaching in general *in vacuo*. And lastly they are encouraged by the New York "Evening Post", which knows better and of whose ultimate conversion I do not yet despair.

Now I do not propose to enter into the detail of the argument for the ideal of scholarship. The question is really settled; whatever we may think here in America at any one particular time, the question is settled by the consensus of the civilized world. The civilized world has decided that a serious higher scholarship is an essential organism of the national life of any nation that counts itself civilized. It is recognized as a fact that the Germany of today is differentiated from the Turkey of today as the nineteenth and twentieth centuries are differentiated from the eighth or ninth centuries, not only by science, not only by physical science and by vast industrial expansion; they are differentiated quite as much by the fact that they produced and the other did not produce critical exact scholarship with regard to the works of the human spirit as manifested by literature, language, history and art. That is quite as much a distinguishing mark of modern civilization against the medieval times of Germany, of Modern Ger-

many against Turkey and the Orient, as science and history are, and that of itself marks the desire of the civilized world, and is enough. We do not need to argue the question.

It is not a question, then, of the minute details of any particular scholastic investigation. It is a question of this actual fact of possessing or not possessing somewhere in the national life a sincere and organized scholarship that we are concerned with. That might be illustrated by what goes on in our banks. A few dollars more or less in the bank balance is perfectly insignificant as compared with another turn over of money in a great national bank. But if the balance is a few cents out the cashier remains until he gets the balance. And if that spirit did not exist in our business affairs, our business affairs would sink into utter chaos. In the same way take the illustration of proof reading. It is an insignificant affair, is it not, whether a French accent is misplaced on a particular page of a book; it is an insignificant matter, is it not, whether a word here or there is misspelled? But unless there is a body of trained and scientific proof readers for whom all scientific matter were worth while, within fifty years you could not trust any statement in any book in the United States. Now in the same way think of a genuine effort toward scholarship and a corps of trained experts who devote their lives to it in our universities and colleges, that enters into the life of the community in a thousand ways that I have no time to explain. It determines ultimately the quality of our schools, the quality of our text books; it determines ultimately the quality of the lectures that we listen to; it determines ultimately the quality of our public speaking, our sermons; it determines ultimately the quality of our plays; it determines ultimately every manifestation of the intellectual life of a community. And a community's intellectual life will gradually sink to a lower level without that higher keyboard playing down upon the lower keyboard.

That in brief is one of the essential lessons: that any civilization that has the claim to the name of civilization must maintain this point of the higher intellectual life. As I said, nothing is easier,—overlooking this broader aspect of the matter on which the consensus of the civilized world is agreed,—nothing is easier than to descend to persiflage, to particular manifestations of what is very pedantry. And it is carried on by our own people. There is no surer gag to work on an audience

with than a list of the titles of Doctors' dissertations. I am ashamed to say how many times I have myself told the story of the German Doctor's dissertation that actually exists, on "The Hiccoughs of Aristophanes in Plato's Symposium." And I must confess that I myself am the author of a small brochure entitled "Choriambic Dimeter and the Rehabilitation of the Antispast." (Laughter). You see, Ladies and Gentlemen, it works even here and I could not resist the temptation. That distinguished philosopher whom we have already lost, Professor James, could not resist the temptation and he wrote an indignant paper on the Ph. D. Fetish or the Octopus of the Ph. D., assailing graduate knowledge and assailing scholarship. And he must have known better. In the same way President Hadley has spoken about the Doctors' dissertations of the muck rake, referring to the petty details of scholarship put into the dissertations. And President Nicholas Murray Butler, and other college presidents, have said things under the temptation of carrying the audience with them that I have no doubt they blushed for in private.

But as I say, that is not the way to look at it, easy as it is. The way to look at it is to take the total effect of scholarship, the total effect of the presence or absence of that particular organ of higher intellectual life of the nation in its proper place, which is our graduate schools in the main, with some influence of our colleges or at least of the teachers of our colleges.

In answer to all that, it is today said that our graduate schools as a matter of fact, however noble these ideals may be, are mere schools for the production of pedantry. The Doctor's dissertation is confidently assailed and the whole scheme and curriculum of the graduate school is assailed. I have no time to enter into that question in detail. I can merely say that such attacks are almost always unworthy, almost always rest on a perversion of the most obvious and simple facts. The graduate curriculum and the Doctor's dissertation are the simplest and most flexible in interest, which at any time we please we can modify in any way we please in the direction of more courses or a more exact course.

What does the graduate curriculum mean? Simply defined, that those who are to teach in our schools shall know a little more than the next day's lesson. It means that they shall have studied for three years the subject they are going to teach, after having received a liberal education and studied

systematically and proved that they have studied systematically by writing something that they can publish and submit to the judgment of their peers. That the Doctor's dissertation must necessarily be a piece of bald pedantry has no foundation whatever. It may be as readable or interesting or broad a piece of writing as the student or instructor in charge of it is able to make it.

The other assault on our graduate schools is due to the fact that it is said very often, I regret to say, by the jealousy of secondary teachers, that those big pedants who come out from the graduate schools are bad teachers. That again I can hardly think is really believed to any great extent. It is undoubtedly true that a young man coming from a graduate school may occasionally for a time lose his perspective. But he can soon recover his balance and if he is not hopelessly perverted he will recover his balance; and when he recovers his balance then he is full of the knowledge and the enthusiasm and the real mastery of his subject—and any man who has not mastered his subject never can become a really inspiring, enthusiastic teacher. It is as it was with the college graduate's earning capacity, you do not judge him by his salary the first year but bv his power to develop. And it is only the man who has received a proper training in the subject he is teaching that has the possibility of development into a real teacher in the end.

The logic of those who say that the man who knows too much is fatally incapacitated for life, while the man who does not know enough can learn a little more, reminds me of nothing so much as the logic of the old sailor who said that if a rope was too short you could splice it, but if it was too long he did not know what you could do with it. As Goethe said, there is nothing in the world so terrible as a teacher who knows only just what he is to teach. Deficiency of knowledge glazes his eyes, limits his soul, deprives him of all pleasures and makes him afraid of his class instead of dominating it. It is the one fatal thing in teaching.

Furthermore, we have to consider what is the alternative if we renounce our present flexible system of preparing our teachers to undertake the training of the graduate school and the submission of results to the judgment of their peers through dissertations. One thing is the old alternative of favoritism. When your college president is in search of a professor of Sociology or Greek, what he has to do, instead of consulting the leaders of graduate schools throughout the country,

is to appoint the third cousin of a trustee's wife. That will carry us back to the system which prevailed at the time of the greatest corruption of politics and education in the seventeenth century in England and illustrated aptly by the fragment of a letter of Lord Chesterfield to his son written about 1750. He says, "Since you do not care to become an assessor of the imperial chamber, and desire an establishment in England, what would you say to a Greek professorship at one of the Universities? It is a very easy sinecure and it does not require any more knowledge than I am sure you already possess". That is the form that prevailed in the England of that day. I trust we are not to return to it.

The other method is eloquence. Instead of relying on favoritism, we will fill our chairs with pleasant speakers, with the man who can hold the attention of a Chautauqua audience. Instead of filling our chairs of Physiology and Physics and Greek and Latin and Philosophy and Chemistry with specialists we will fill them with superannuated clergymen and tired journalists and similar extinct mud volcanoes.

Neither of these alternatives will work. The only question is whether America is to play its part in that higher life of the spirit which is not wholly scholarship but which is dependent very largely on scholarship. The movement will go on. Scholarship, minute, accurate, investigating scholarship will continue. In the last twenty years our graduate schools have gradually been building up a big school of American scholarship of which we need not be ashamed, a big school which has not yet achieved the very great things but which has achieved extremely creditable things which are taken seriously throughout the world.

The question is, are we going to discourage that scholarship? Or are we going to make that choice that testifies of serious knowledge, serious power, serious preparation on the part of our instructors. And the practical lesson of all this I would direct to our college presidents and our educational leaders who have the ear of the public. And the moral would be that it is wrong for them to yield to the temptation of pleasing an audience or catering to popular prejudice by discouraging this young school of scholarship and throw us back, tend to throw us back, at least, upon the old chaotic system because they cannot resist the temptation of this facile belittling of scholarship.

The Ideal of Efficiency.

Robert Mark Wenley, Professor of Philosophy, University of Michigan.

Mr. Chancellor, Ladies and Gentlemen:

It is hard to believe that opinions about the value and ends of education were ever in such a state of chaos as now. Apparently, men have learned how to quarrel in proportion as they have forgotten how to convince. Nevertheless, when we select the term "efficiency" from a mob of misty words, we are amazed to uncover a general agreement—to disagree. So much so, that the most militant "authorities" all stomach for a fight, often disagree with themselves, especially in lucid intervals of respite from the congenial pursuit of whacking their colleagues. Indeed, proliferant educational literature (so-called) lending conclusive witness, one may well exclaim, in this connection, Consistency, thou art a mule! Personally, I am no friend of panaceas, and have no scheme wherewithal to enlighten the elect, the pedagogical elect particularly. But I may be pardoned if, when the matter is without form and void, and darkness is upon the face of the deep, I incline to a conviction—call it a prejudice, if you please—that the spirit of philosophy should be permitted to brood upon the face of the waters. It may help, if little else, to divide the light from the darkness. It will certainly be forward to call the light Day, and the darkness Night. And, as for the humble philosopher himself, this being *par excellence* an age of epithets, even the crow may display his voice no less shamelessly than the peacock his tail, always provided he recall his *haecceitas,* or "crowosity": a paramount consideration when an affair so disreputable as efficiency is to be *erklärt und dargestellt.* For we must remember that *haecceitas* is incommunicable. Plainly, as your faces indicate, I speak a parable. And he took up his parable and said, Balak (in the Scots tongue, McCormick) hath brought me from Aram (in the language of the United States, Ann Arbor) out of the mountains of the East (that is, the hillocks of the Huron Valley), saying, 'Come, curse me Jacob' (the walking delegate of economic advantage). And the interpretation of the parable is this. For the subtle spirit of philosophy, great virtue resides in the incommunicable, otherwise known as the negative. Accordingly, the text, upon which I am condemned to trim, has all the merits of elimination,

and may be formulated thus: the world is full of spurious 'efficiencies' founded on the materialistic basis of barter. Thanks to the negative, then, we have jettisoned the entire deck-cargo unceremoniously, and, as a result, progress comes with the bounds of decent possibility.

Even so, when we approach efficiency as an *educational ideal,* we must eschew certain misconceptions born of current convention. A good brief could be drawn, I believe, for the case that insatiable desire for mastery in the realm of ideas is the exception rather than the rule. When one has amassed a sufficiency of information to "keep the wolf from the door," he is apt to develop self-satisfaction, nay, to regard his neighbor, who would go farther, as a reprehensible, disagreeable, or even dangerous person. And the reason lies to hand. Every society sets its peculiar conception of the means necessary to a desirable life, and inevitably emphasis changes venue from internal to external qualities. Seeing that it is proverbially more delicious to behold the mote in a brother's eye than to see the beam in one's own eye, let me cite an English illustration. When the Education Bill of 1896 was under consideration, the National Council of the Independent Labor Party declared "that no system of education will be satisfactory which does not provide: (1) That every public Elementary School shall be brought into a condition of thorough efficiency: (2) That the children in the Schools shall be so taught for a sufficient period as to effectively prepare them for the work and duty of life: (3) That the children, while under such teaching, shall be maintained by the State". That is to say, in conformity with the general temperament and circumstances of the English-speaking peoples, efficiency was linked with industrial affairs, and left to the tender mercies of quantitative or external standards. Now, as concerns *instruction*, efficiency and industry are undoubtedly allied. On the other hand, *education,* in any relation, must never be confounded with "the work and duty of life", in this meaning of that windy phrase. For, while it would be absurd to contend that the ideal of efficiency can have no place on the commercial plane of life, another interpretation is requisite when ends are in question. Industry, as understood commonly, originates from the body and its demands. Education, as an ideal, springs primarily "from the need of the intellect to understand the causes of the phenomena by which man is surrounded" and will have done

its work when we can banish the words "why" and "wherefore" from our vocabulary.

Yet, although a moment's reflection serves to signalize this difference, it remains true that the struggle for existence produces a set of precepts or directions for self-preservation such as can be learned and are usually taught. Hence, a society accustomed to rate efficiency in industrial units, passes all too easily to a second confusion, and thinks educational institutions are *places* where teaching, with obvious reference to "preparation for life", is the be-all and end-all. The notion that young folk should be fed with facts, examined on them, and then let loose as "efficients," crowds out every saner conception —the banal "school" norm becomes ubiquitous. In short, efficiency is regarded as a *means* to something else which, often enough, lies quite beyond the field of education; while, on the contrary, education as an ideal *end,* a context in a growing body of knowledge, drops from ken. Curiosity about ideas, absorption in the things of the mind for their own great sake—these be forms of the immortal illusion. For a few material accompaniments of efficiency, to the exclusion of efficiency itself, control the outlook. Seeing that the land shouts for engines of destruction and construction, let us scrutinize the youth for the earlier evidences of mechanical genius, let us submit this raw material to "sound money-getting instruction", and lo! all will be well.

"When he was quite a tiny boy; yes, only just so big,
He'd build his little houses, his tiny ships he'd rig,
And out of strips of leather make little cart and wheel,
And, oh! such pretty little frogs of waste pomegranate peel."

Here is the broad road that leadeth to efficiency, follow it, and even reasonable things will come to pass! Little wonder, then, if under pressure of this sort, efficiency masquerades as a professional shibboleth, if it portend the trading-stamp, and if, the world being rough, ideals grow very footsore. But, our glorious auto-intoxication notwithstanding, I fear that the *Bon Marchè* of life places few bargains on its counter. Immersed in the exploitation of the world under our feet, it may readily happen we shall be cheated of our vision of the firmament. In any event, efficiency as an educational ideal pertains, not to these things, indispensable as they are, but to man himself. For veritable efficiency demands a splendid stage, one on which the actors cannot succumb to the vulgar or base. And man must needs devise this stage within his own soul. Suc-

cess here, and efficiency, happen to be identical. The industrial, commercial, and so forth, are not excluded by any means, but, rather, transmuted.

Accordingly, efficiency, as I understand it, is a personal ideal, and can be bestowed upon institutions or systems only by individuals. So far from assimilating itself to mechanical adjustments, it implies a state of spiritual being. I say "being" because the state is not intellectual, not emotional, not even moral only; the three play their indispensable parts as elements in a larger whole. Thus, the subject of it is moral, and not to be seduced by the apples of Atalanta, whose dangers Bacon noted long ago; he is emotional, ideas haunting him like a passion; he is intellectual, and neither to be dazzled by guess-work nor cozened by solemn trifling. So he exhibits a poise that mint-marks the reality of his ideal. Nor is this trait the prerogative of any pursuit, the effluence of any *Fach.* Be he a mathematician or a physicist, a zoölogist or a psychologist, a scholar or historian or philosopher, an engineer or manufacturing chemist, a lawyer or banker, the educated man, possessed by the ideal of efficiency, recognizes his kind forthwith and anywhere. For, as Henry Nettleship said, "No acquisition of modern times is more remarkable than the nearer realization of the unity of spirit which pervades all research. Among a multitude of laborers in various fields of knowledge, there is a consciousness of a common aim, a common method a common inspiration. This consciousness is no mere abstraction, but a living reality; the active pursuit of truth is as strong as the bond of charity.—It is of the essence of a liberal education that it should stand in constant relation to the advance of knowledge". And, liberality absent, ideals are mere metaphrastic phantasies. Briefly, efficiency is not a kind of thing or quality or faculty that you can abstract for purposes of measurement; it is the expression of a man—of a forthright personality—as he energizes freely, following what he conceives to be the master clue.

By the way of conclusion, then, let us attempt to realize a little more fully what this imports: a difficult, mayhap, impossible quest, because the ideal estimates of conscience, even of intellectual conscience, elude the clumsy grasp of words.

In an aphorism, quoted often since, Gautier said, "Literature does not create morals, it follows them". Like other pert generalizations, this one may be argued to weariness. But I can discover no good ground for argument when we apply the

contrary to education, and particularly to ideals in education. In our day, education seems unable to shake off that condition of valetudinarian convalescence, best known as opportunism, All the while it seeks a lead and, as constantly, fails to give one. Whether manifest in the institution or group, in the teacher or individual, I take this to be "the very form and pressure" of efficiency. For the ideal of educational efficiency subsists in and on originative personality. Inspired by it a human being undergoes veritable enfranchisement. He receives no order, telling what to do or how; but a power endows him so that, in virtue of his own quickening, he goes forth conquering and to conquer. The secret of real strength is betrayed by him constantly—his inexhaustible reserve issues from a tireless aspiration. Caught up by an insight that he wots not of, he nevertheless *has* had a glimpse of the goal, and cannot forget.

"I am a wanderer; I remember well
One journey how I feared the track was missed
So long the city I desired to reach
Lay hid; when suddenly its spires afar
Flashed through the circling clouds; you may conceive
My transport; soon the vapours closed again,
But I had seen the city, and one such glance
No darkness could obscure".

Yes, the efficient reveals to himself a state of completion whereto he ever tends. With this urging on, and with the cooperant determination to realize it somehow, if but in a fragment and in an instant, he not only casts off all "torpor of assurance", but serves himself naïvely a source of kindred inspiration to others. Thus gathering together his mature endowment, he becomes the circlet that "prophesies the orb," and suffices his brethren. Accomplishments of things uncommon, as by some spectacular oddity, form no part of his equipment; but he does "common things in an uncommon way."

Evidently, then, if this state of spiritual being can note the ideal of efficiency, we are confronted by a condition that is not transferable by any deed of gift. Such a spirit may—I think must—*persuade* others into partnership. Yet a man of this seminal breed dare not reproduce himself—that would balk efficiency in the pupil. Discipular servitude burns no sweet incense for a genuine master. Still, by the very fact that he seizes others, he governs them, and with most potent sway. The sterile, the unauthoritative, the mediocre, those

venerable waifs of our school system, can never effect such results. Despite abundant respectability, the spiritual means that spell efficiency are quite denied them. In other words, a derivative man, no matter how palaeozoic his memory, cannot grasp the prerequisites of the efficiency ideal. On the contrary, apprehended of this ideal, the man of sterling education exercises, albeit unconsciously, the subtlest art of persuasion. No "spiritual rat-catcher" to adopt Nietzche's lambent phrase—he yet induces his temper in others. Knowing that his lights are broken, he energizes ceaselessly to release himself from middlingness, and sloughs all manner of accretions from a dead past. Earnest and inexorable, he yet realizes that his severity towards himself measures his devotion to the ideal. A stranger to colorless neutrality, the "baser sort" may as well agree in the way at once that they cannot neutralize him. Thus his self-sacrificing diligence gets him souls to his hire, and he stands amazed at the reward, deeming it utterly beyond his poor deserts, only to find the paradox breed—to greet more and more souls who trace their conversion to him, confessing gladly that through him they first began to be alive intellectually.

Yes, the ideal of efficiency in education abides solely with the man who, being persuaded, is able to perform. Nor is the performance any miracle, as I fancy I hear some of you allege after my skeleton synopsis. Nay, I would not, likely enough could not, testify thus, were it not that, so far as I count for aught when my feeble person is at its best, I am myself a soul to the hire of the grasp, power, and insight of the greatest teacher I ever knew, one to whom efficiency was the ideal, and in whom it remained an ever-vitalizing force. Of a truth the efficient is the ministering spirit in whom his fosterlings—ay, and many others,—discern "the dawn of the next nature, the new man whose will they venture in the place of theirs, and whom they trust to find them new ways to the new heights which yet he only sees". As I have said, this state of spiritual being is no dream or flight of unchastened fancy—I have met it face to face in the flesh, with all its self-confessed imperfections upon its head; and ever since my soul has burned within me.

Accordingly, the steps toward its attainment involve nothing wonderful, much less abnormal. No doubt, natural endowment were indispensable; but far more the sane eye for values in the world and in the things thereof. Sadly though we make the confession, there are those who, having "detected the hog

in Nature, take Nature for the hog". They have chosen what Carlyle called the downward and devilward way, thanks to that inversion of ideals whereby we men enjoy dread liberty to "idealize ourselves into dirt." But, granted natural endowment, with exemption from the sordid accompaniments of grossness, and the means to the highest efficiency are no whit mysterious. Strength to bear, or to neglect, non-significant distractions; cheerful acceptance of personal limitation, with consequent redoubled zeal to do well what one can do to the uttermost; clear faith in truth; rigid conscientiousness—here is the short list. All are free gifts to any man, and all await the one man who has power to charm them into a single, pulsating unity. When he has wrought his noble work, we have a right to declare, Here is the ideal, and to add—

"There's not any law
Exceeds his knowledge; neither is it lawful
That he should stoop to any other law".

The Ideal of Citizenship.

Charles Franklin Thwing, President, Western Reserve University.

Mr. Chancellor and Friends:

Many and diverse are the ways available for treating this, as every other part of this rich program. After some deliberation I have decided that the least unworthy contribution to be made under this title would consist:

1st. Of a statement of what the colleges have achieved in securing these ideals of citizenship.

2nd. Of what they may do under a complex social condition at the present time or in the immediate future.

In the Executive Department of the national government, of twenty-seven presidents, fifteen have been liberally educated. John Adams, John Quincy Adams, and Theodore Roosevelt received their education from Harvard College; Jefferson, Madison and Tyler, from William and Mary; Polk from the University of North Carolina; Pierce from Bowdoin; Buchanan from Dickinson; Hayes from Kenyon; Garfield from Williams; Arthur from Union; Benjamin Harrison from Miami; McKinley from Allegheny; and Taft from Yale University. Monroe was a student in William and Mary, but left

college to join the Revolutionary army, and William H. Harrison was a member of Hampden-Sidney College in Virginia, but did not graduate. One half of the vice-presidents have had the same advantage. Of our vice-presidents who have not served in the office of president, Burr, Dallas, and Hobart were graduates of Princeton; Gerry, of Harvard; Tompkins, of Columbia; Calhoun, of Yale; Richard M. Johnson, of Transylvania in Kentucky; King, of the University of North Carolina; Stevenson, of Centre College, Kentucky; Fairbanks, of Ohio Wesleyan; and Sherman, of Hamilton College, Wheeler was for two years a student in the University of Vermont. The larger proportion of the members of the Cabinet have been liberally educated. Of the forty-one men who have filled the office of Secretary of State, twenty-seven have been graduated from colleges, and five others were in college for a longer or shorter period. Jefferson, Randolph, Madison, and Nelson were graduated from William and Mary, and Monroe attended the same institution until the breaking out of the Revolutionary War, when he enlisted; Pickering, John Quincy Adams, Everett, and Bacon received degrees from Harvard; Smith, Livingston, Forsyth, and Upshur, from Princeton; Calhoun, Clayton, and Evarts, from Yale; Marcy, Olney, and Hay, from Brown; Webster, from Dartmouth; Legare, from the College of South Carolina; Buchanan, from Dickinson; Fish, from Columbia; Blaine, from Washington; Frelinghuysen, from Rutgers; Foster, from the University of Indiana, at which institution Gresham also attended one year; Day, from Michigan; and Knox received a degree from Mount Union. McLane was a member of Newark College, Delaware, for three years; Seward was in Union the same length of time; and Sherman was in college two years. And also, it should not be forgotten that in the solution of the critical questions which Seward was obliged to make, he especially relied on a president of Yale College, Theodore Dwight Woolsey; on Francis Wharton, a graduate of Yale in the class of 1839; and on William Beach Lawrence, a Columbia graduate in 1818. Of the Secretaries of the Treasury, Hamilton received a degree from Columbia in 1774; Wolcott took his first degree at Yale, as did MacVeagh; Dexter, Richardson, and Fairchild, at Harvard; Gallatin, at Geneva, Switzerland; Campbell, Rush and Bibb, at Princeton; Dallas, at Edinburgh; Taney and Thomas, at Dickinson; Woodbury and Chase, at Dartmouth; Ewing, at Ohio University; Spencer, at Union; Walker and

Meredith, at the University of Pennsylvania; Cobb, at Franklin; Dix, at the University of Montreal; Fessenden, at Bowdoin, where also McCullough attended for two years; Bristow, at Jefferson; Folger, at Hobart; Shaw, at Cornell College, in Iowa; and McLane was for a time a student at Newark, Delaware, and Lot M. Morrill at Colby (Waterville) in Maine. One cannot forget, too, that in the office of the Secretaryship of the Treasury, it is the college graduate who has rendered the most conspicuous service. Robert Morris, who gave superb advice in the management of the financial affairs of the country during the Revolution, declining the honor of becoming Secretary of the Treasury, pointed out Hamilton as the man best qualified to arrange the finances of the new nation. Hamilton was a graduate of Columbia. Chase, also called to the service of the nation in a crisis as great as that in which Hamilton served, was a graduate of Dartmouth in 1826; and Fessenden, Chase's successor, was a graduate of Bowdoin in the class of 1823. In this relation it is not unfitting to say that, in 1865, the man who was named chairman of a committee upon national taxation and revenues, and who did for the nation after the Civil War a service as important as Robert Morris rendered at the time of the War of the Revolution, was a graduate of Williams of the class of 1847—David A. Wells. Of those who have held other portfolios in the Cabinets somewhat more than half have received a liberal education.

The history of the foreign service of our government is a history on the whole even more honorable than the history of its legislative and executive functions. At the most important courts of the world we have been well represented. To these courts Harvard has contributed such men as the Adamses,—father, son and grandson,—Elbridge Gerry, Rufus King, George Bancroft, Caleb Cushing, Motley, James Russell Lowell, John Chandler Bancroft Davis, Robert Tod Lincoln, Charlemagne Tower, Edward H. Stroebel, and Joseph H. Choate. It may be said, too, that George Downing, a graduate of Harvard in the class of 1642, went to England and became, besides filling other important posts, a minister to Holland of Cromwell and Charles II. His name is perpetuated in Downing Street. Yale also has given to our diplomatic service such men as Edward Pierrepont, Joel Barlow, Cassius M. Clay, Peter Parker, William Walter Phelps, Andrew D. White, Charles H. Sherrill, Wayne MacVeagh, and Stanford Newell; Columbia, such citizens as John Jay, Hamilton Fish,

Stewart L. Woodford, and Oscar S. Straus; William and Mary, such statesmen as Jefferson, Monroe, and William C. Rives; Princeton, such sons as George M. Dallas, William L. Dayton, and George H. Boker; Dartmouth, such a scholar as George F. Marsh; and Brown, an administrator like President Angell and an author like John Hay.

Such is the record: a record enlightening to the mind; moving to the patriotic conscience; and quickening to all collegiate endeavor. It is safe.

But what of the present and of the future? For the Victorian age has, like a late staying guest, finally passed out. The era of good feeling has vanished. The social quietness, the mediocre respectability, the timid decorousness, the life which was comparative because it was not superlative, the era of ideals, but of ideals so low that they did not create despair in trying to attain unto them, nor so high that they quickened great enthusiasm in the probability of reaching them, have all gone; both in England and America. We have passed from the age of statics into the age of dynamics. We have come into the age of force, forces, and forcefulness. We have entered from conditions into movements. The age of individualism becoming aggressiveness; of aggressiveness becoming unrest; of unrest becoming social and industrial reformation; of reformation becoming social and industrial revolution; of revolution tending toward anarchy, seems at last to have come upon us.

Now in this condition, sketched so imperfectly in broad lines, *"What can the colleges and the universities do to make things better?"*. The question is significant. For the higher education does not desire to nurse a fugitive and cloistered virtue. It desires to serve—as it ought to serve—the highest, broadest, deepest, and most enduring interests of man.

The higher education can help men, its students, to look at facts as they are, and to weigh the evidence which these facts present. Of course, the colleges have always been seeking to achieve this result. The colleges have always been trying to teach this significant fact that two and two make four. A significant fact, indeed, for always there are some in the community who are trying to squeeze two and two into three, and an equal number who are trying to enlarge them into five. In the training of this power of looking at facts as they are, and in weighing evidence, lies the worth of education. But the College has a special duty laid upon itself to transmute this gen-

eral obligation into a duty specific and particular. For to the great social and industrial facts one is specially liable to be blind. The facts are not remote like the reforms of the Gracchi. They are immediate. So close are they that it is difficult to see them as they are; to interpret their relations; to point out their significance; or to lay down a course of conduct based upon their meanings. But they are pregnant with new births for men. Their nearness generates passion. Truth's white light has a small chance for shining. For better or for worse, for destruction or for construction in this different environment, they must be interpreted. Such interpretation the College can inspire its men to seek to make. It should help men to see these phenomena sanely, and to see them whole.

The College, further, may give greater place to what I call the human sciences. These sciences include history, economics, government and sociology. The increase in the emphasis laid on these subjects has, in a score of years, been vast. It is hardly possible to exaggerate the increase. It is not for me to depreciate the worth of the natural sciences, either as intellectual disciplines or as revelations of the wonders of creative process. Let the natural sciences have their full and adequate place. But I do believe the social and industrial conditions demand that college men shall go forth with some understanding of the complexity and seriousness of these conditions. For the complexity and seriousness of these phenomena are giving rise to the social and industrial quack. Who is the quack? He is the man who has a ready-made diagnosis of disease and a remedy no less ready-made for its cure. The social quack abounds. The quack of the Single Tax, the semi-quack of Municipal Ownership, are plentiful. "Go to, now! *This* is the cause of all your ills. And *this,* without fail, will save you". As if any patent medicine could save. The people are misled. Harm results. The disease spreads. The patient grows worse. Where can help be found? I know too well the imperfections and weaknesses of the colleges. But if help is coming, it must come in accordance with the great human laws which are as real as, though harder to understand than, the great laws of nature. These laws, these principles, of social, political, civil, and industrial well-being are studied, considered, related to each other in the colleges and universities. The men who have been students of these laws and principles are above all others best qualified to apply these laws to the body politic and social. Humanity goes on repeating its ex-

periments which have failed. Its memory is short. The colleges stand for accumulated thought. They represent and present the history of human experimentation. The colleges should save men, at least somewhat, from repeating their great social errors and mistakes. The result of all the help the colleges can give will indeed be poor enough, but these results are the most precious and effective which humanity in its present stage of cultivation can attain to.

It is a happy augury that no subjects are so popular in the American Colleges as these "Human Sciences". Students appreciate their importance and are touched by the appeal which they make to present-day life. Though lacking the disciplinary value of the exact sciences and mathematics, though lacking also, certain interpretative values of the classical languages, they do give, if taken up subsequent to a proper study of the exact sciences, an enlargement and enrichment to the mind of the student and a peculiar inspiration to be a worker in a world of work.

But there is a further method which the colleges may use in overcoming the anarchistic tendencies of the social and industrial movement. This method consists in the establishment of departments of the Human Sciences, for the special advantages of men of mature years who are especially interested in these subjects and who have not been able, by reason of their limitations, to give themselves a proper education. This suggestion is by no means new. It bears memories of movements which have a somewhat prolonged history. The workingmen's colleges of fifty years ago, in which the great Maurice and the versatile Kingsley were founders and sponsors and supporters, embody the same great idea. Today no better exponent of the movement is found than is incarnated in Ruskin College at Oxford. The difficulties in laying such a foundation are neither few in number nor slight. The ordinary members of a college faculty are seldom able to undertake such a task. Their duties are altogether too heavy for any such permanent additional service. For a brief time they may take such work upon themselves but not as a lasting service. A special staff, therefore, is to be organized; and such a staff, competent in mind and conscience, is hard to secure. Furthermore, many men desiring to become students are found to lack a proper general education. They have not the intellectual qualifications to take up special social studies, than which no subjects are more complex. Their eagerness and enthusiasm go a certain way—with

some men, a long way—in overcoming the lack of trained mental power; but enthusiasm cannot be accepted as a substitute for a trained intellect. Though, therefore, every college may well consider the question of offering such courses, especially if placed in the midst of an urban community, yet the outlook is not bright for results either comprehensive or lasting.

At the close of President Thwing's address the guests of the University were entertained at luncheon at the Hotel Schenley.

2:30 P. M. EDUCATIONAL CONFERENCE.

The afternoon program, continuing the educational conference, was resumed at half past two, Dr. Arthur A. Hamerschlag, Director of the Carnegie Technical Schools, presiding. The general subject was "The City University", the subject being presented under four divisions, as follows:

The Field of the City University.

Will Grant Chambers, Dean of the School of Education, University of Pittsburgh*.

Mr. Chancellor, Ladies and Gentlemen:

I hesitate a great deal indeed to attempt this task which was thrust upon me so suddenly, especially when we have present representatives of institutions which are doing the work we hope to do in Pittsburgh and are, to a certain extent, doing now; and especially in view of the fact that we have with us the Chancellor of the University for whom this study is his very life and who could tell the story so much better and so much fuller and so much more inspiringly than I can hope to do.

But in the few moments which I feel are all that I should take or ask for on this occasion I will try to indicate in a general way what I conceive to be the difference between a municipal university, a university in a great city, and an institution in the country or remote from a great city. A generation ago the question of the city university was, if I am correctly informed, a question very little thought of. Most institutions were simply educational institutions and they grew up to teach and

(A telegram was received late Monday evening from Chancellor Houston of Washington University, who was to have presented this topic, stating that he was unable to be present. At the close of the forenoon conference Chancellor McCormick requested Dean Chambers to speak in Chancellor Houston's place on the program).

develop academic ideals which they had inspired, doing their work as best they could in the service of general education, not realizing in a good many ways that there was any such thing as a local environment. In other words, all scholarship was the environment of the educational institution, and the institution was rendering its full service when it rendered the best service it could to scholarship at large.

But with the development of our municipal life and the great number of problems which this municipal life has brought to us, there must needs be a municipal university. The problems of the city are specific problems and they differ from the problems of the country and of the world at large. Furthermore, each city has its own specific problems. They are different from the problems of any other city. Consequently it is inevitable that an institution developing within a given city must develop, if it survive and render its genuine service; must become an institution contributing to the life of its particular city.

Of course in a certain sense every institution is a local institution; in the sense, I mean, in which it draws its constituency largely from the immediate environment. It is a rare institution indeed which does not get three-fourths to nine-tenths of its student body from within a hundred miles of the institution. There are a few such, but they are very few indeed.

One of the most helpful figures which we have learned to use in education in recent years, borrowed from that science which has given us so many helpful figures in education, is the figure of organic relationship. We like to think of things pertaining to education in terms of organism and its functions, and here it seems to me we find the most helpful figure for pointing out briefly the relation of the city University to its city.

What do we mean by the function of an organism? It implies first of all a living thing, a living creature. It implies secondly an environment. It implies in the third place an intimate inter-action between this living thing and its environment. Take away the environment and the organism ceases to live. Take away the organism and the environment ceases to change. The health of the organism and the service which it can render to its environment both depend upon the intimate inter-action of the organism and its environment. This inter-action we call the functioning of the organism. It means the growing, the

developing, the coming into fruition of the organism. On the other side it means a constant change in the environment. And the helpful lesson for us is that the organism can not develop except as the environment is changed. It is absolutely impossible for the organism to attain its growth unless it attain its growth at the expense of a change in its environment. Consequently the functioning of the organism means the future good of the organism and its environment for the purpose for which both exist. Let the organism come out of relation to its environment and it immediately dies.

Applying this figure, now, to an institution, if the institution is then a local institution the affairs of the community are its affairs. Its growth depends upon the extent to which it realizes the problems of the community and contributes to their solution. The welfare of the community, on the other hand, the development of the community also depends upon the extent to which this institution realizes and solves the problems which properly belong to it for solution. Let the institution once forget its responsibility to the community and it becomes isolated, it atrophies, it dies, so far as the local community is concerned. It is deprived of an environment; the environment is deprived of a transforming, transmuting, progressive agency.

Such an institution is capable of rendering just as much service to its immediate environment as an oyster in its shell. And too often in times past the institution has done the very thing that the bivalve has done, has secreted its shell, rendering all progress for itself impossible and all contribution to its immediate environment equally impossible.

Education, at any rate in a democracy, means leadership. But leadership means the development of those who are to lead out of those who are to be led. In such a country as ours we do not look to hereditary leadership. We expect that the community shall produce its own leaders. If it do that there must be within the community an institution for this direct specific agency of transforming those of proper ability and tendencies into the leaders of their kind. That, it seems to me, in a general way represents the function of the city university.

Now how can the community be brought into relation with the institution for the benefit of the institution? In a general way, every community surrounding a city university should be in all respects which affect the life of that university, its laboratory. No phase of the life of the community to which

the university could by any manner of means make its contribution, should be kept isolated from the university. The university should not wait until the community thrusts its problems upon it; but it is the business of the university to go out in search of those problems, to go out and examine those aspects of life which it may modify for the future benefit of the institution and the community. That, then, in a general way is what the community should be in respect to the university.

Now of course any well developed, well organized university has its several schools. I do not want to trespass upon the fields to be discussed in the other addresses today, but I want to suggest just one or two points in relation to a half dozen or so of the schools of the university, to suggest ways in which those schools may be brought into helpful inter-action with the community and thus carry out the organic conception of the relation of the institution to its community.

How then may the college of a university be brought into direct relations with its city community? If we can accept the judgment of those who spoke this morning, the particular function of the college is culture. Has the college then fulfilled its full responsibility, when it has offered instruction to those persons, those young people in the community, who desire a college education? That is undoubtedly a large part of its responsibility, but yet it is only a part. In addition to that it is the business of the college to stimulate a desire for culture. In other words, it must produce its own market. It is well for it to have an education to offer to those who desire it; it is much better for it to stimulate in those who do not desire an education a desire for one. Consequently the college in any city community must be an agency to stimulate a demand for education, to stimulate an interest in and an appreciation of all that belongs to culture. And if it fall short of that ideal it has fallen short, certainly, of some of its greatest possibilities.

We were told this morning that it is the function of the graduate school to promote scholarship. Should this scholarship then not be in relation to the needs of the community. There may be problems challenging the investigation of the school which would be equally appropriately studied by any graduate school. There are certainly those problems which pertain to all scholarship the world over which might be properly attacked by any institution. But certainly in addition to

that and certainly forming the largest part of the work of the graduate school, there are those problems which belong to the locality, the community, which are crying out for solution. Here, for example, in Pittsburgh we are all desiring very much the solution of the smoke problem. How can we consume these clouds of smoke which hinder us in all that we try to do? It seems to me that a graduate school in such a locality as this should devote itself to the solution of the smoke problem, and I am glad to be able to say that the University of Pittsburgh, through a chair in its graduate school, is at work upon that problem.

In such a community as this, where the manufacture of glass is a great industry, certainly the study of problems pertaining to the manufacture of glass would be entirely worthy of the ablest graduate study that we can bring to it, and that is another of the graduate problems being investigated at this time in the graduate school of this University.

In the last number of the "Literary Digest" a joke was perpetrated against the University of Pittsburgh to this effect, that the University of Pittsburgh had undertaken the manufacture of food products out of the by-products of kerosene, and thus would enter into competition with the Standard Oil Company. It went on further to say that it would befit the University of Pittsburgh much better if it would devote its attention to trying to manufacture sausages out of pig iron. That of course is a local problem.

Should an engineering school in such a university as ours, or in any municipal university, content itself with offering training to those desiring to become engineers? By no means. That is an important part of its business, but it is only a part. It should furnish labor and leadership, to be sure, in those particular industries which it affects, but in addition to that it has its local problems to solve. There are problems characteristic of the local industries which are probably not found anywhere else in just that form, and certainly it is the business of the engineering school to discover and solve as best it may those problems and then turn out young men prepared to carry that solution to its practical applications.

Furthermore, the mills of the community should become laboratories for the engineering school. In other words, that co-operative assistance which is being applied here and in a few other places should be a fundamental part of the organization and activities of a municipal engineering school. It

should study those problems at first hand in the mills. It is one thing to abstract a problem from its natural setting and to study it in isolation. Thus we can give helpful research which can be carried back and applied. But we would be much more certain of our results and their applicability to the problem and their practicability, if it is discovered in its natural environment and solved there, because then the application is already made.

Similarly with the school of mines. I cannot take time to elaborate. So with the school of economics, the school of education, each has its own particular side of the community life to affect. If the organic relationship is to be kept up there must be mutual inter-action between that particular school and that particular phase of the life of the community. The School of Economics in addition to training men for business could take up consular service, statesmanship, and must certainly devote its attention to the solution of the local problems which affect its particular department. It must study those problems of the community, local politics, the study of philanthropy, and, along with the medical school and certain other schools, certain other problems which call for joint study.

The school of education: In addition to training the teacher and continuing the education of teachers, there is a service which is a large part of its duty. It must enter into active co-operation with the schools in such a way that when emergencies arise it will be possible to furnish free instruction for a brief period of time to tide over the difficulty. It must study the local educational problems which are its problems in particular, as well as the problems of education in general. It must serve as a clearing house of all matters educational for the benefit of those who can not devote their time to keeping up to date in such matters.

The medical and dental schools have their similar service in addition to giving the training they have to give to those who seek it. They, too, must create their market; they, too, must come into inter-action with their phase of the life of the community. In their contributions to the hospitals and the social and charitable institutions they can help the life of the community in a way different from that of merely training physicians or dentists. To study the problems of sanitation, water supply, milk supply, tenement life, in conjunction with the school of economics would certainly be a large part of the future activities, and an inevitable result of such a school.

Now I have briefly hinted at, simply hinted at some of the ways in which I think the field of the city university should be mapped out in general. The city university can only become efficient by helping. It must be the local environment for the future growth of the institution.

Methods of Utilizing the Material.

Guy Allan Tawney, Professor of Philosophy, University of Cincinnati.

Mr. Chancellor, Ladies and Gentlemen:

I cannot allow the opportunity to pass without saying that the University of Cincinnati sends greetings and congratulations to the University of Pittsburgh for the many years of noble service in the past, and for the splendid promise of this hour for the future. The University of Cincinnati watches the activities of this University with a particularly sympathetic interest because of the close resemblance of our problems and methods to your own. We take a brother's pride in your triumphs! We expect to take a brother's warning from your defeats—if you ever have any! From year to year and month to month we take counsel in your councils! So marked is the resemblance of our life and work to your own that I hope to be pardoned if in this paper I speak chiefly about the problems and work of our institution.

The University of Cincinnati differs from the University of Pittsburgh in two respects. Our financial support comes chiefly from the city's treasury, and our students up to the present time come chiefly from the homes of the city. Our Board of Directors is appointed by the Mayor of the city, three members being named by each new administration. For several years past we have received by law, as a part of our financial support, the proceeds from a one-half mill tax on the properties listed in the city's tax-duplicate. Consequently, our life as a University is more intimately bound up with the life of the city than is yours, and the University of Cincinnati recognizes it to be her first duty, as it is also her privilege, to render to the city, to the utmost of her capacity, certain moral, spiritual and material values for value received. The relation of the University to the city of Cincinnati is one of participation in a life of which we are intimately a part, rather than one of co-operation with a life of which we are independent. By the conditions of our existence as a University our work is

inseparably bound up with the best life of a community of a half-million of people.

Nevertheless, shortly after the beginning of President Dabney's administration in 1904, the term "Coöperation" became the watchword of the departments composing the University of Cincinnati, as it has since come to be the watchword of the University of Pittsburgh. Co-operation (as defined in the annual report of Dean Burris in the year 1908) means the plan "for using all the existing local establishments, whether public schools, factories, hospitals, social settlements, museums, libraries, zoological gardens, water-works, gas and electric plants, or street railways in the training of men and women for practical life and service. The local industries co-operate with the Engineering College in the training of engineers, for example, just as the local public schools co-operate with the College for Teachers in the training of teachers". For the past seven years our students have worked in the shops and factories of the city as a part of their preparation for the duties of professional engineers. For the same number of years our College for Teachers has played an important part in the organization and work of the public schools of the city. The students of our Medical College actually labor in the dispensaries and hospitals. Our professors of Economics, Political Science and Sociology are continually called upon to render services to the city in the many political and charitable bureaus, clubs and associations of the city, while the students of these departments receive part of their university training by actual participation in these kinds of work. For many years past, and until the plan of using the public schools as centers of social work began to take definite shape, the University maintained a settlement in the heart of one of the factory districts of the city. Our medical faculty and our chemists have been accustomed to discharge certain official and unofficial duties in connection with the Health Department of the city. Our engineers and chemists are from time to time called upon to render important services in connection with the work of the city's Public Service Board by testing the materials to be used and advising as to plans to be carried out in the various construction and improvement projects of the city government. It is just now being proposed that advanced students in the department of chemistry, acting under the supervision of experts in the faculty, do all the chemical analysis of paving materials, coal and all other supplies bought by the city's purchasing

agent for the departments of the city government and for other city institutions. For many years the department of economics maintained and managed a school of finance, commerce and accounts down in the city for the benefit of young men who, for lack of means or for other reasons, could not take advantage of the privileges of the University itself; and the buildings of the University are now being used for a night school of the same nature watched over and manned by the departments and students of the University. The University gives courses in biblical literature and in the psychology and philosophy of religions in which many students of Lane Theological Seminary and the Hebrew Union College, and many ministers of the city's churches, are enrolled. By a system of so-called external lectures, various departments in the University have for years given regular instruction to large classes not otherwise connected with the University in the various public schools and libraries of the city, while a course of lectures on the Ropes Foundation every year draws large crowds of people from the city to the main auditorium of the University. Moreover, the University sustains interesting relations to certain musical organizations in the city and to Cincinnati's well known Art Academy.

It cannot but mean much to the life of a community to have a University in its midst so closely and vitally interested in practically all of its institutions; and on the other hand it means much to the University thus to have a great municipal community at its door-step offering its multifarious life as a laboratory in which our educational project may go forward; but the truth is that the University does not exist merely for the sake of the city, and neither does the city exist for the sake of the University. The truth about the relations of the city and the University cannot be told either by formulation of the matter. The underlying presupposition of the University of Cincinnati is not a municipal theory of University values, but rather an educational theory of all municipal values. Whether she realizes it or not, the proposition to which the city of Cincinnati is now committed is, that the ultimate apology for the existence of the city, and of any city, is the education of men and women, that the ultimate criterion of values in city institutions, city customs, and city affairs is the educational criterion, and that the important question to be asked of any municipality is not "Are you growing more numerous or more wealthy?", but rather "Are you producing men?" Since the

present administration of the University and the present administration of the public schools of Cincinnati began, some eight or nine years ago, this ideal has continually been urged upon the city. It has been urged, namely, that the city really is and actually ought to become one vast educational institution in which no man can live and not know with what great destinies knowledge has come into the world, in which every life shall be touched by the magician's wand of liberty, and in which no laws, customs or institutions will be possible which are inconsistent with this, the city's chief business. This we believe to be the foremost methodological principle of the City University, that the city as a whole exists with the University in it for no other ultimate reason than that all men who dwell within her corporate limits and influence may be effectively free.

The burden of the work of converting the city to this ideal and of persistently urging it upon all those who have the control of her institutions in their hands necessarily falls chiefly upon the administrative heads of the educational institutions of the city, and especially upon the administrative heads of the University and its colleges. In order that I may be more explicit, permit me briefly to outline the relations now existing first between our College for Teachers and the city schools, and then between the College of Engineering and various industrial plants of the city.

The College for Teachers of the University of Cincinnati is under the control of a "Committee in Charge" consisting of the Superintendent of Public Schools, Dr. Dyer, the President of the University, Dr. Dabney, one member elected by and from the city's Board of Education, and one member elected by and from the University's Board of Directors. The College for Teachers is closely affiliated with the College of Liberal Arts, with the Kindergarten Training School and with the Art Academy of Cincinnati. Graduates from the College for Teachers receive either the degree of Bachelor of Arts in Education, or they may by fulfiling the requirements of the College of Liberal Arts receive the degree of Bachelor of Arts from that College and at the same time a certificate of professional training from the College for Teachers, the College of Liberal Arts allowing twenty-four credits in education to count toward the Bachelor of Arts degree. Graduates of the College for Teachers are placed upon a "merit list" for appointment at a salary of some $150 more per annum than appointees who have

not had this or an equivalent training. This "merit list" is practically in the hands of one of the professors of the College for Teachers. Naturally the time is rapidly approaching when practically all vacancies in the city schools will be filled from this list.

For the purpose of observation and practice, the city schools are placed at the disposal of the student of the College for Teachers, under the expert guidance of members of the faculty. This work is largely confined to the student's senior year, and it parallels the courses in special methods begun in junior year. In preparation for teaching a certain subject the student-teacher first visits the school and observes a class in that subject for from three to nine periods, with instructions to become acquainted with the members of the class, learn their names and their characters as bright or dull, quick or slow. The student-teacher is required to read a special method book on the particular subject he is to teach, and then to prepare a plan for presenting the subject-matter of the first four or five lessons. These plans are inspected and criticised in individual conference with the critic teacher. Then comes the practical work under the eye of the expert who is a member of the faculty, and it is followed by further conference with the critic teacher. This practice work amounts to only about thirty hours of actual teaching in the course of a year for each student, but this is not all. Just because nearly all of the graduates from the College for Teachers find positions in the city schools, this observation and criticism is continued by members of the faculty for a period of about two months after the teacher's work begins, and it is only after this further testing of his work that the teacher receives a temporary appointment in the schools. The oversight and criticism of the College for Teachers continues for a year of professional teaching before the teacher is recommended for a permanent appointment. The fact that appointments are permanent justifies this careful selection and painstaking drill.

Moreover, the promotions of teachers in the public schools are largely under the control of the faculty. The "promotion list" is in charge of one of the officers of the College for Teachers. In general, promotions are determined by the teacher's general average as a college student, the general average of the grades he received from the city's Board of Examiners, and a grade given by the College for Teachers which repre-

sents his ability as a teacher. The latter grade is of course based upon faculty inspection of his work.

For teachers already employed in the city schools at the time when the College for Teachers was organized, the University offers a large number of special courses, given either at the University or at other convenient centers on Saturday mornings or after school hours on other days of the week. The College for Teachers offers to such teachers, in addition to ordinary courses of professional instruction, grade conferences, 'model lessons' with groups of children before teachers and principals, round tables, discussions, etc., the aim of all being to bring the teacher to higher degrees of technical skill and to inject the ideals of the University into the work of the public schools. Out of about eleven hundred teachers enrolled in the public schools of Cincinnati, over one-half take these special courses year by year and accurate records are kept at the University as part of the data upon which promotions are based.

The Board of Education pays the salaries of the special instructors necessary to carry on this work of professional training to meet the needs of the city schools, these instructors being permitted to offer other work in the University so far as they may feel disposed, provided it does not interfere in any way with the work incident to this professional training. The amount of financial support which the University receives from the Board of Education of the city totals some $10,000.00 annually.

The provisions for securing competent teachers for the two magnificent high schools of the city differ somewhat from those which I have mentioned, but I hope enough has been said to show the method of this co-ordination. It may be of interest to observe further that the University does not attempt to carry on a system of inspection covering the ordinary work of those teachers in the public schools who are not graduates of the University and who are not taking special courses in methods in the University, because such inspection would disturb the cordial co-operation of these teachers in the matter of our students' observation-work and practice teaching.

The College of Engineering offers two courses to its students,—one the ordinary four years course, and the other a five years co-operative course. The registration in the former for the year 1910-11 was forty-nine, the registration for the co-operative course for the same year was two hundred and thirty-eight. I shall speak only of this co-operative

course, and that quite briefly. The idea of combining theoretical training with practical experience in the preparation of students for their life-work is of course not new. It is at least as old as the Reformation. The idea of combining theory and practice in technical training is as old as the continuation schools of England. An old Massachusetts law, I am told, provided that the State should establish public schools in which children could acquire the instruments of culture, and that children should be taught the rudiments of industrial skill at the same time in the home. With the development of great manufacturing industries on a capitalistic basis, the industrial arts were gradually transferred from the home to the factories.

Today we are trying to introduce into the public schools under the name of manual training the elementary forms of technical discipline which the child formerly learned at home. So far as I know, Dean Schneider of the College of Engineering of the University of Cincinnati was, in this country at least, the originator of the idea that regular university courses in engineering could be made to comprehend daily shop-work by the students under the critical observation of the faculty in the manufacturing plants of the city in which the university is located. He brought this idea with him when he came to Cincinnati. Indeed, I have heard him say that he first looked to Pittsburgh for an opportunity to put the idea to the test of actual experience. For some reason, he came to Cincinnati to make the experiment and the city of Cincinnati is glad that he did. After a year of deliberation and investigation both here in America and in the great universities of Europe, especially those of England and Scotland, President Dabney became profoundly interested in Professor Schneider's idea and gave him leave to work out a plan. The idea fitted perfectly into President Dabney's idea of a city-university, the only serious question being as to its feasibility.

The manufacturers of the city were at first doubtful, for the most part, as to the practicability of the undertaking, but the university's persistent efforts were soon to be rewarded by the enthusiastic support of a very large part of the factory superintendents and managers of the city. In the year 1905 the first class of co-operative engineers were enrolled in the College. After a year's trial, the University authorities decided to call a council of interested men to consider whether the co-operative plan was a success or a failure. It was with practi-

cal unanimity pronounced a success. One factory superintendent said, "When I was invited to this meeting, I expected to say what I have always said, that the plan would not work; but I sent for the cards of the students who have worked in my shops for the past year, and found that they cause less trouble than other men, that they do more work and better work than the others receiving the same wages, and that they are neat and orderly about their work. I am not in the least interested in your educational project, but purely as a business proposition I am willing to take on twenty of these men next year". So the plan was continued, its success became more pronounced from year to year, and it now attracts more attention from the University world and from the general public than any other feature of the work in the University of Cincinnati.

Because the plan has received so much attention, I shall speak of only a few of its essential features. "Students in the course work alternate weeks at the University and at commercial shops. The classes are divided into two sections which alternate with each other, so that when one section is at the University, the other is at the shops. The length of the course is five years, the alternation being carried on eleven months of the year". (From the general catalogue of the University for the year 1911-1912). The work in the shops, like the practice-teaching of students in the College for Teachers, is carried on under the critical supervision of a Professor in Charge of Co-ordination. This work is all organized by the Faculty of the College of Engineering, and the students are graded on it just as much as on their University work. Conferences are held with the students when they return to the University, and they are taught to assume a critical attitude toward their own methods.

One important feature of this co-operative course is the method of the Dean in selecting the students who enter upon it. Not all who knock at the door are permitted to enter in. "The first year the course was in operation about 60 young men came to the University to inquire about it. Of these 45 were taken into the shops for their preliminary summer work, and when the University opened in the fall 28 were entered. The second year there were 800 inquiries and applications. Of these 60 were selected and sent into the shops in July, and when the College opened in the fall 44 were recommended to us and started on their University work. The third year the inquiries and applications approximated 2,000, but owing to

the crowded condition of the University in its various departments, only 44 were selected and sent into the shops for their summer work, of whom 40 began their College work in September". "The young man selected for the co-operative course has a strong physique, has shown aptitude for his particular profession, and his scholastic grades in accredited high schools average ninety. It should be evident that the efficiency of our instruction is increased many per cent by this careful selection of the raw material". (From Dean Schneider's annual report, December, 1908).

The methods of utilizing the resources of the city university in Cincinnati are more organized in these two colleges than in the others, but I cannot leave the subject without referring to one or two other forms of co-operation which I believe are becoming increasingly characteristic of the University. The first is in affairs political and moral, and the second in affairs religious. The influence of the University in the direction of a patient and wise conservatism in political and moral affairs is growing. Courses in city government and in charities and correction are among the most popular in the entire course of study. In the excitement of party warfare, in the discontent and passion of party strife, the University is coming to be a steadying power. When selfish interests seek undue private benefit through governmental aid, the University is there with her quiet, clear-eyed reproof. When the attempt is made to lure the people from their honest thoughts and blind them to the sad plight of municipal dishonor and bad faith, the mere presence of the University may be a correcting and illuminating guide.

We cannot too much emphasize the value to any community of vital courses in history. In these days of natural science, people are apt to be impatient of the past, and trust themselves too far in experimental methods in both politics and morality. "The world's memory must be kept alive or we shall never see an end of its old mistakes. We are in danger of losing our identity, and becoming infantile in every generation". The great menace to our institutions is not any desire on the part of the masses to work some dire iniquity in the world, for they wish a just and righteous polity as much as we ourselves. Our greatest dangers lie in the fact that the voting masses cannot rightly see the present because they will not be informed as to the past. It is one of the greatest privileges of the University to co-operate with all men in keeping faith with

our own identities, and to this end we have no laboratories like the world of books and men which lives and speaks in the libraries and class-rooms of every true university. We may belie the past, stiffen it with pedantry, sophisticate it with argument and chill it with unsympathetic comment, but if we are real teachers and true men, it will live in our midst and speak words of golden wisdom to all who live within the shadows of our halls.

Moreover, I believe that the aspects of education represented at the city university should go to the roots of our moral life. I would have the atmosphere of the place reverential always, its exercises marked by a serious regard for whatsoever things are true, whatsoever things are honest, whatsoever things are just, whatsoever things are pure, whatsoever things are of good report; and we shall have done much in a co-operative way if the graduates of our colleges are so appreciative of these things that they will think on them. But if it be true that, in the University, scientific themes should be discussed in a religious spirit, it is also true that religious themes are to be discussed in a scientific spirit and with strict regard to the demands of scientific method. The City University of my dreams will have thorough courses in the principles of scientific method and every course will be an exercise in the practice of scientific method; for this method is after all merely the sincerity and honor of our intellectual tasks. I would have the City University above all things a place of honesty in talk, a place where no man will conceal the thoughts that are dearest to him as a means of protecting them, a place where youth may come for delightful companionships and satisfying conversation. It should be a free and manifold place where no man can be and not realize in some degree what are the boundless privileges of the spirit. It should be a place apart, and yet correspond in its life to the varied world without,—here, "magic casements opening on the foam of perilous seas, in fairy lands forlorn"; there, windows opening straight upon the street where many stand and talk; like the world in the humanity of its interests, different from the world as light differs from heat; a place slow to become excited, but quick to take up any matter that pertains to men and their affairs; its atmosphere wholesome with the pure air of religious faith, "every eye within it bright in the clear day and quick to look toward heaven for the confirmation of its hope". May the University of Pittsburgh be *such a place!*

The Relation of the City University to other Educational Agencies.

Frederick Paul Keppel, Dean of Columbia College, Columbia University.

Mr. Chairman, Ladies and Gentlemen:

The term "educational agency" may be as wide or as narrow as one pleases. In the case of Robert Bruce, for instance, the spider and its thread were distinctly educational agencies, and nowadays we highly appreciate as university material organizations and activities whose educational value lay long unrecognized. The action of the University of Wisconsin in calmly appropriating the state government as a political laboratory is not an isolated instance. Anything and everything may be an educational agency, actual or potential. It is the business of the university, among its many other businesses, to see that the educational possibilities of everything with which it comes into contact are brought out, and I may say in passing, that there are very few institutions in the world which have wider or richer opportunities for contact of this kind than the University of Pittsburgh.

It is not sufficient to have a general sense of the desirability of a close co-operation between the university and the other educational agencies. We need in addition a vigorous, intelligent, and, above all, an ingenious leadership on the part of the university. In very many instances the other institutions fail to recognize their wealth of opportunity, and it is for the university to educate them, not arrogantly and patronizingly, but with tact and sympathy. Furthermore, the university must search as diligently for opportunities to give as for opportunities to receive from the others. Its buildings should be open for meetings in any worthy cause. Its athletic grounds and gymnasium should be available for schoolboy and settlement games. In short, it should, so far as possible, be an instrument of broadly public rather than of narrowly academic service.

The unparalleled generosity of individual donors to American institutions on the one hand, and the equally lavish support of certain state universities on the other, have tended to make us overlook the fact that our cities and towns, with but very few exceptions, lag far behind those of England in the support and encouragement of their local institutions of learning. While the question of the relation of the University to the

municipality, as such, seems to fall rather within the province of other speakers, I should like to bring respectfully to the attention of the city fathers of Pittsburgh the fact that the City Council of Birmingham has just voted an annual grant of $80,000, and has in addition established fifteen scholarships in the University of Birmingham. The other municipal universities in England receive similar aid from the towns in which they are situated, and the ancient guilds of London are generous supporters of London University.

In dealing more specifically with different educational agencies, we may begin by a consideration of the relations of the university to the public and private schools; but at the very outset let us remind ourselves that to be useful these relations must be considered by the university in a spirit of real co-operation and not of patronage. The university professor is not necessarily a being superior to the school teacher. He is only different, and, so to speak, the difference is not all on one side. I do not mean by this that the point of view of the university should always accord with that of, say, the public school administration. It is one of the chief functions of a university to maintain standards, and, if honest care be taken to see that they are really standards and not prejudices, they should be maintained even at the risk of temporary unpopularity and lack of support. There is no place nowadays for an invertebrate university.

The relations with the school system are two-fold: In the first place, opportunities must be open to those who can profitably go beyond the point of graduation from the high school. Whether or not these high school graduates should be permitted to take up immediately professional work is a question for each institution to decide for itself. The general tendency among the universities throughout the country is toward a requirement of at least two years of collegiate work before beginning the study of any profession, and this policy, which I am glad to see has been adopted here so far as the study of medicine is concerned, should be borne in mind as an ideal, though its immediate application for all departments is not practicable.

The second relation is with the teachers. They should be given every opportunity to profit by the near presence of a university, not only through the organization of thorough courses of study at hours when they can conveniently attend during the academic year, and, if possible, in the summer as well, but by

special informal privileges in its library and laboratories. The establishment of close and helpful relations with the school teachers is one of the instances where virtue is certainly its own reward. Not only are such teachers likely to advise their best pupils to enter the university, but the effectiveness of the undergraduate teaching can be greatly enhanced by the passing on of the teacher's intimate personal knowledge of his pupils. The personal care of college students is receiving more intelligent consideration today throughout the country than ever before—and I am not forgetting the Golden Age to which our attention is frequently called—and there is no more important factor in this personal care than the bridging over of the gap between school life and college life.

The relation of the university with nearby colleges and technical schools is a matter upon which an outsider can speak only in the most general terms. I think, however, that I can say without arousing controversy that there is certainly not more money available for educational matters than can profitably be used. This being the case, the duplication of expensive equipment which can at best be used but by a few is to be deplored. In general, however, a vigorous rivalry all along the line is a real blessing. The best thing that ever happened to our College of Physicians and Surgeons was the establishment of the Cornell Medical School in New York.

If no opportunities exist for the men and women of the community who are interested in any particular field of study to come together for the interchange of ideas, the university should create such opportunities; for this personal contact is stimulating to all concerned.

The maintenance of permanently pleasant relations—both official and individual—between the nearby and more or less competing institutions demands a rigorous observance of the academic amenities in all matters having to do with the transfer of students, the issuing of invitations and of formal and informal reference to other institutions. More hard feeling can be engendered by carelessness in these matters than in any way that I know.

The place of the Hospital and Dispensary as educational agencies, and particularly in their relation to medical education, is attracting close attention throughout the country today, and Pittsburgh is to be congratulated if those in charge of her institutions of this character realize that their responsibility for providing educational opportunity for the advancement of

medical knowledge is no whit less direct or insistent than their responsibility for the relief of individual sufferers. American cities have been slow to learn this lesson, but a great change of attitude has taken place in the past five years, and the outlook for medical education was never so bright as it is today.

There should also be the closest co-operation between the public and private libraries of the vicinity and the university. Such a relation should effect a great saving in the purchase of books for which there is only a limited demand. At Columbia, for example, we have an informal understanding with the New York Public Library, with the Theological Seminaries and with such institutions as the Botanical Garden, the Hispanic Society, the New York Historical Society and the like, whereby each takes to itself certain fields of scholarship for particular development. Catalog cards are exchanged and the books are borrowed by the other institutions as need arises. This does away with an expensive and useless rivalry in purchases. The opportunities for scholarly co-operation with the museums and other public scientific collections, particularly in a community which is so rich in these matters as Pittsburgh, can hardly be overestimated, but the relations must be carefully considered on both sides in order to reach their fullest usefulness. Whether the same thing is done here I do not know, but at Columbia certain of our advanced courses in archaeology are actually conducted at the Metropolitan Museum, those in anthropology and zoology at the Museum of Natural History, and those in botany at the Botanical Gardens. It is my personal belief that one of the fundamental weaknesses in our university education for men today is the comparative neglect of the study and appreciation of the Fine Arts, and were I a benevolent despot in charge of the University of Pittsburgh, I should prescribe as prerequisite to an academic degree some familiarity with the treasures of art for which the city is world-famous.

The university should ally itself closely with the whole altruistic life of the city. To pick an example here and there, there should be offered thorough courses for the training of Sunday School teachers, and the services of the university experts in social and economic fields should always be available for the consideration of problems which may arise in the community. Students should be encouraged to take their share in settlement and other charitable work. I am informed that the most effective work at Lawrence, Mass., in breaking down the

racial and class hatreds, of which the strikes have given so terrible a proof, is being carried on by the boys of the Phillips Andover Academy.

The possibility of developing opportunities for technical students through the great industrial organizations is not being overlooked by the University of Pittsburgh. I venture to predict that in the next decade—if the urban universities remember to give as well as to get—this co-operation between them and the factories and mills will be carried to a length far beyond anything we can imagine today.

There are one or two less definitely organized agencies which should not be overlooked. The educational effectiveness of the drama can hardly be overestimated, but it may be for good or for ill, and the influence of a particular play, or of a general theatrical policy, is something upon which the university, if it is to be the intellectual leader of the community, should be heard with no uncertain sound. Bad plays should be condemned and good ones should be helped in every way possible. For example, when plays, whether classical or modern, that are of real importance to the public, and not merely to the astute press agent, are performed in Pittsburgh, or opera is given, I think the University might well increase their usefulness by public lectures given before the performances.

The public press is an educational agency which a university man approaches with the utmost diffidence. We have all of us suffered from the imaginativeness (or worse) of energetic reporters, and, above all, from the dreadful person who creates headlines bearing a more or less close relation, usually less, to the solid matter beneath. The way to better present conditions, however, is not for the university to ignore the newspaper, or to use it merely as a vehicle when opportunity offers to get free advertising. The news of every day contains a dozen items of general interest which could be better treated, so far as the public is concerned, if the special knowledge of some member of the university could be made available. To gain this knowledge there are many things for the newspaper to remember which it is now prone to forget, but there are also some things for the university professor to bear in mind. In the first place, the conditions under which the newspaper man works are wholly different from his own. A journal is not a research institution and the reporter has no opportunity to cultivate an academic deliberativeness of thought and action. Nothing is of use to him which he cannot have before

the presses begin to turn. Secondly, the professor who is averse to personal publicity can avoid it. Very often the newspaper man is best served by being referred to some authoritative book or article upon which he can pounce and from which he can extract the juice. When once a spirit of confidence and co-operation has been established between the university and the press, the former may rely far more freely than is generally the case at present, upon the discretion and co-operation of the newspaper men. The difference in the class of newspaper items regarding the different universities of the country does not reflect alone the relative sensationalism of the newspapers in their vicinities.

The fact is sometimes overlooked, but the American University is primarily a teaching institution, and in a paper of this kind one should refer at least to its responsibility as a teaching institution for developing in its regular students a broad sense of civic responsibility and opportunity, so that when they become alumni they may both derive profit from these educational agencies and may also serve them to the best of their ability. And this brings me to what is perhaps the most important aspect of the whole problem. It certainly is the one most frequently overlooked. The one thing that must constantly be borne in mind is that all these developments, interesting and admirable as they are in themselves, are sources of weakness and not of strength, if they are done at the expense of the teaching efficiency of the institution. We have a great way in America of adding straw after straw to the load of the academic camel and then of wondering at the unsatisfactory progress of the animal. If we want extension courses and public lectures, if we wish to make the learning of our scholars available to the community in other ways, we must be prepared to pay for these things from some other store than the quality of our regular instruction or the life-blood of our teachers. Happy is the institution whose endowments permit this payment to be made from the regular revenues! Where this is not the case we must set ourselves resolutely to the long but not the hopeless task of educating the community to make proper provision for their adequate support.

Forms of University Service to the Community.

George Cary Comstock, Director of The Graduate School, University of Wisconsin.

Mr. Chairman:

The title here assigned me is in some measure a misnomer of my real theme, since it is far from my purpose at this time to discuss all those forms in which university service to the commonwealth may find expression. My more modest function relates only to those newer forms of direct service rendered by gown to town and country that have recently come to the fore as a supplement to the older and better known types of academic activity. Uncanonical forms are they, not the product of any theory of the university and its logical sphere of action but sprung from the exigency of the hour, the sporadic product of many minds, pushing out along specific lines of usefulness often narrowly viewed and oftentimes leaving between these lines great provinces of unappreciated opportunity that still await the discoverer and the cultivator. Despite the irregular and ragged development of the idea of extra-mural service by the university, its forms actually put into operation have already become far too numerous for individual treatment upon an occasion like the present, and I must perforce resort to some analysis of them with only so much recourse to individual instances as may serve to illustrate the suggested types of service.

As the first of these types, let us consider that form of teaching sometimes called University Extension, in which the university goes out to those who cannot come to it and offers instruction in that for which there is a demand. The *crux* of the situation is in the last phrase. The subject matter of the instruction is chosen by the recipient to meet his own supposed needs; it is not prescribed to fit any academic pattern. The latter type of extension teaching, projecting into the surrounding community the topics and methods of the college class room, was tried and found wanting some decades ago, while simultaneously with this, at least partial, failure there grew up as commercial ventures flourishing correspondence schools dealing for the most part with vocational subjects which held out to the pupil the promise of material advancement. It is no part of my purpose to treat the merits or demerits of these schools, but only to insist that their very existence seems an anomaly to one imbued with the idea of a state-supported sys-

tem of education extending from the primary school to the professional college. At least, so it appeared to one state legislature confronted with data showing that its own constituents were annually expending hundreds of thousands of hard-earned dollars and an untold amount of ill-spared rest in pursuit of a type of education not officially recognized. From the girl stenographer and the immigrant, born to a foreign tongue, who alike sought a better use of the English language, to the bank clerk and even the banker himself who sought for instruction in the principles of his calling, the demand was for vocational training; and the legislature, prompted by the University, decreed that such training should be a part of the state system of education, that the appropriation made for its support should be entrusted to the University, and that this institution should be charged with the duty of finding the most effective methods of administering the new service. The last commission is a continuing one with no end in sight, although much progress has been made in developing the initially crude methods of correspondence and lecturing into an elaborate system in which field organizers, local instructors, and a special staff of correspondence teachers serve outside the University a larger number of students than are gathered within its walls.

While in the main this instruction is vocational, the University recognizes no obligations thus to limit its extra-mural teaching, and responds with equal readiness to the call for any instruction within its power to give, from primary to college grades, extending even to the latter a certain measure of credit toward partially absolving its requirements for academic degrees. But it is upon the vocational side that success has been most pronounced, and in particular, service to the artisan class has been received with equal favor by the labor union and by employers of labor, many of whom have allotted to their employes paid time in which to meet university instructors in rooms specially allotted to that purpose in mill or factory. Believing firmly in the value of such work as the above, the university by no means regards it as a substitute for or as replacing the older academic form of instruction and inspiration to a student community gathered within its walls. The outside work is a pure addition to that done within, an addition that should not impair either the spirit or quality of the latter, save as perchance it may render it more catholic through contact with a larger world, more sympathetic and more influential in its relation to other forms of industrial education, a making

of two blades of grass to grow in the soil that had borne but one.

A second type of university service to which I would invite your attention is summarized under the familiar term "Research". In some of its phases this striving to extend the bounds of knowledge in many institutions has become a normal part of academic duty, an obligation, moral if not legal, but an obligation resting upon the professor as such rather than upon the institution as a whole. The recognized character and established status of such individual work must excuse the scant heed here given it.

There is another type of research more pertinent to our present theme: the opportunity, the duty, of the University itself to serve the community at points and in ways for which the existing store of available knowledge is inadequate. To initiate and prosecute research along those lines where public needs outstrip the results of private endeavor! Let me choose in illustration two cases from the annals of a northern state. Its farmers desired to grow corn,—"they needed it in their business"—but short seasons made the commercial seed corn derived from lower latitudes ill-adapted to their purpose, and an early frost carried in its train wide-spread loss amounting even to public disaster. Appeal was made to the University to breed a variety of corn adapted to the given climatic conditions; nay, to breed it to fit specifications furnished in advance. There must be a single ear to the stalk, the leaves must be broad and succulent for profitable use in the silo, etc. The University undertook the task, and this prescribed research growing out of a public need is still in progress; but its partial results, eagerly embraced by the community, are shown in a yield per acre that has increased in each year of the past decade, and has within that time transformed a crop of forty million bushels into one of sixty millions upon an acreage substantially unchanged.

Contrast with this research in the strict sense of the word a similar agricultural service involving no addition in knowledge, but only the piecing together of things individually well known, but in fact combined and utilized only through the university expert. Formaldehyde, first "made in Germany", is a powerful germicide, and may be applied to the destruction of fungus growth. Smut, a pestilent disease affecting oats and annually producing loss measured by many millions of dollars,

is in its nature a fungus growth. Formaldehyde may be applied to the prevention of smut through the ridiculously simple process of soaking the seed grain in a diluted solution of the chemical, a fact practically unknown to the agricultural community half a generation ago, but within that time and under the stimulus of university instruction, it has been so applied to the almost complete extinction of the disease in the region of which I speak. Is not such service a proper university function? Do two illustrations or even ten exhaust the possibilities of this case? Is there not rather indefinite opportunity, still unutilized, at which scientific attainments of the university type may be made to serve the needs of a Commonwealth? Before answering these inquiries, let us pause to note that the University here enters the traditional field of the inventor, the application of known scientific principles of practical needs, and to inquire if such service is really its proper function. I conceive that the answer to this query should be somewhat as follows: Wherever law or custom secures to the inventor substantial personal reward for successful work he will be alert and the field may well be left to him. No public agency is required for its cultivation. But is not the oat smut typical of a class of cases in which the reward, however great, inures to the public benefit, with so scant return to the investigator that he will divert his efforts elsewhere, since for private gain the field will not repay cultivation. If cultivated at all, it must be at the hands of some public agency seeking the public weal; and is not this the province of the University? Does the discharge of this new service derogate from the old ones, impair its dignity, or diminish its influence in things intellectual or spiritual? A categorical No! is the response made by those universities that have developed recently an interesting type of utilitarian research through fellowships subsidized by industrial organizations for the avowed purpose of research in prescribed fields for the benefit of the industry in question; an application of the "grub stake" principle whose outcome and influence time alone can tell. But whatever may be the final judgment, it cannot impugn the privilege and obligation of the university to conduct investigation for the public weal.

A third type of university service to the state may fairly enough be termed police duty, comparable although not identical with that of an officer wearing a star and doing a beat. The complexity of modern life has produced forms of regulation and protection unknown to a simpler society and many of

these require for their proper administration a measure of technical knowledge, a store of scientific appliances far beyond the range of an ordinary constable. What is whiskey? Is benzoate of soda an adulterant when placed in food products? These are questions propounded by the national government to the university laboratory, and they are typical of what must continually arise under any public supervision of food products. A similar necessity has in one state within my ken vested in its University the technical side of supervision not of human food alone but of feed stuffs for cattle, of artificial fertilizers, of the purity of seeds and their freedom from noxious weeds, and has imposed upon it the supervision of live stock breeding, so that within the state borders no stallion may stand for hire without a university certificate as to his pedigree, whether pure bred, grade, or scrub. The general principle lying back of these somewhat unusual assignments of duty is that wherever needful public regulation requires special knowledge or special equipment more readily accessible in a university than elsewhere, the University may reasonably be invited or required to apply such facilities to the public service.

An extension of this principle beyond the bounds of police regulation is found in a very recent statute requiring one state university to purchase an outfit of stump-pulling machinery and to operate it at cost in the service of the people who could not individually afford to purchase expensive machinery, but whose farms when cleared of the encumbering remains of the forest will constitute an increased wealth to the whole state.

Essentially similar to its police duty are the sanitary supervision and hygienic functions that may be, and are, by law or custom delegated to the University. An epidemic of typhoid must be followed by a sanitary survey, usually beyond the powers of a local board of health, which shall determine the source of the infection, leaving its eradication to local authority. An important service may be rendered, is rendered, by the University in the diagnosis and treatment of unusual types of disease, e. g. rabies, and in the preparation and distribution of preventive serums not readily accessible through commercial channels. Indeed, the functions of this part of the University may be defined as general co-operation with the health authorities and medical profession of the state.

In a simple form of society the "all-around man" who knows something of every phase of life, may be the type best

adapted to public usefulness. With increasing complexity of the social fabric the all-around man moves down in rank, perhaps becomes impossible, and there is a relative increase in the importance of specialized service and in demand for training for that service. It is this influence that has revolutionized university curricula and university faculties, filling the latter with men whose competence to give specialized training presupposes technical attainments of a high order, attainments that may well find expression in public service outside the class room or laboratory.

I would urge, therefore, as a fourth type of university usefulness expert service along those lines in which its faculties possess a larger measure of competence than is readily attainable through the ordinary channels of trade. Service of private interests by the professor for private gain, however legitimate in itself, is not here contemplated, but rather such service as is exemplified in the "baker's institute", a conference under university auspices and initiative wherein the chemist and bacteriologist discuss with the commercial baker the technical difficulties of his calling, and the economist confers with him upon trade problems of accounting and marketing his wares. No fanciful whim, but a picture taken from real life. The resultant benefit to an individual trade is here overshadowed by larger advantages to public digestion and public health.

Limitation of time permits only one other illustration of such expert service. The Tax Commission and the Railroad Commission of the State of Wisconsin having found themselves in continually recurring need of engineering advice have formed with the state university a joint engineering service based upon the material and personnel of the College of Mechanics and Engineering, and this bureau has become an abiding feature in the relation between university and state, services and salaries being divided upon an agreed basis between the several parties to the arrangement. Upon its technical side, the service thus rendered to the state covers a very wide range of subjects, the valuation of public utilities, the adequacy of public safety devices, standards of public service, the legitimate cost of rendering such service, etc., down to the conditions governing congestion in street traffic. The quality of the service thus rendered and its professional repute are sufficiently attested by the numerous requests made for its extension to municipalities and public

service corporations without the state. It has, in fact, been loaned to communities as distant as Los Angeles, Boston, and Pittsburgh.

Under the title "expert service" may also be ranked the function of collating, classifying, and distributing information useful in the conduct of public affairs, but not readily accessible save through organized effort. The reference library as an adjunct to legislation is now well known, and while of university origin has passed beyond the status of a university service. Close behind it, however, comes the municipal reference bureau, which in the form known to the writer is wholly a university matter organized to collect, digest, and keep abreast of current needs information relative to every phase of municipal activity, and to furnish any part of that material upon request. Its field is the city, wherein dwells nearly half the population of the land, and the subject matter with which it has already been called to deal includes such diverse topics as school organization, milk supply, abatement of smoke and dust nuisances, the effect of a wheel tax, parks and playgrounds, care of city trees, commission government, etc. Some of the larger cities of the country have established such bureaus for their own behoof, more have not done so, and among these, particularly among municipalities of medium size, there lies a large field of usefulness for the institution that will render to many a service larger and more efficient than one could secure for itself alone.

We emerge here from under the shadow of the dollar, service whose chief value is measurable in terms of money, and contemplate the University as an agent of social uplift seeking to exemplify what has been done and may be done toward beautifying the city and ameliorating the conditions of city life, collating error or failure as well as success that it may serve as a monitor of civic danger as well as an incentive to civic uplift.

Along such lines the University may, and should, serve minor, voluntary organizations as well as the municipality. Let me briefly place before you a Department of General Welfare that has caught the idea of collective striving after better things, that is prepared upon request to go into any neighborhood and there organize, encourage, and help to perpetuate a civic center for social enjoyment, for common discussion of local or public problems for the development of common interests and communal life. Under its influence it has been enacted by the legislature that every public school house within

its jurisdiction must be given, out of school hours, for such uses upon request of a reasonable number of citizens, and the University contemplating the largeness of opportunity thus opened realizes to the full that this can be made effective only through continuous care and supervision. The seed is easily sown, but without external aid it will rarely mature.

Let one more instance suffice in illustration of the modes of university aid to social uplift. The pugnacious instincts of a ruder ancestry survive in the average lad who loves to wrangle with his mates and with advantage to everyone concerned. This instinct may be turned into the channels of debate, the study and public discussion of topics of current interest. The end to be sought is easily grasped, but what of the means thereto? The resources of village or town are rarely adequate to the purpose, and it remains for some outside agency, the University, to supplement them. To propound suitable questions for debate, to collate the material, to indicate at least the major lines of attack and defense, these are aids proper and useful if not indispensable, and the task of furnishing them has been undertaken by at least one University and prosecuted with marked success. Co-operating with public libraries it collects and loans, usually to the local high school principal, such printed books and documents as are available for each particular case, and supplements these by a provision of its own known as the package library of recent information. Upon topics of current interest the more important periodicals and newspapers often contain material of great moment, indispensable, in fact, for the purpose in hand, and such articles are systematically sought out, clipped, classified, and sent in bundles as a loan to whomsoever may have need of them; for this service is not limited to the debating society. It is equally at the disposition of the orator, the woman's club, the business men's lunch club, or the labor union, and the kind of interest aroused among these diverse elements is shown by the subjects upon which information is most sought, viz. in the order of preference: woman suffrage, the initiative and referendum, commission government, immigration, the parcels post, and the income tax. However little amateur debate may touch the intrinsic merit of such themes, it cannot fail to be a powerful stimulus to civic life whose influence will reach even to the election booth. Is it worth while for the University to be a factor in that influence, striving to affect not so much the ballot as the mental status that lies behind and determines it?

Let us close here an all too fragmentary analysis of types of university service; those enumerated are genuine, but not exhaustive of the case. Some of them represent a permanent relationship between the University and the State; others are essentially temporary in character, services assumed by the University until a more suitable agency can be found for their discharge. Some of them are functions acclaimed on every hand as meet and proper, welcome additions to academic service; others have encountered question and the wagging of conservative heads or tongues. The college faculty harassed by athletics may not regard organized sport as a public duty rightfully borne by the University; the younger alumnus often seems to regard it as a major function. Let the future decide and assign to every form of university activity its proper metes and bounds. For the moment each and every type of attempted service shall serve to illustrate the University's chiefest problem, *how* to serve. That it should minister to the public welfare along every channel in which service can profitably be rendered will be denied by none. The specific lines of such service must ever be sought anew to fit each new environment, but the ruling principle remains ever the same, the will to serve, to discharge in the intellectual realm the function of adjutant general to the State.

TUESDAY, FEBRUARY 27th.

8:15 P. M. HISTORICAL PLAY.

THE VISION OF SHE-WHO-KNOWS.

Carnegie Music Hall.

"The Vision of She-Who-Knows" was written by Mr. George Seibel, Literary Editor of the Pittsburgh "Gazette-Times". The central idea of the play was to represent the historical events and characters associated with the history of Pittsburgh and the University, during the period of the University's existence. The cast included eighty students, and the performance was under the direction of Mr. Alfred W. Birdsall. A large audience was present, and the excellent work of the students was received with great enthusiasm.

The cast was as follows:

She-Who-Knows ..... Beatrice King
Voice of the Wilderness and
Spirit of the City ..... M. J. Schoenfield
George Washington ..... R. H. Wettach
Christopher Gist ..... A. S. Haines
Daniel Boone ..... H. H. Leitch
Nicholas Denau ..... Z. C. Wagoner
Robert Stobo ..... H. G. Wilcox
Pete Baron ..... S. B. McCormick, Jr.
General Braddock ..... Douglass Porter
William Penn ..... C. K. Murray
Guyasuta ..... G. M. Kirk
Oliver Cromwell ..... A. H. Bannister
Joan of Arc ..... Alma Boehrig
Goethe ..... A. Levin
Sarah Curran ..... Goldine Braun
Gautama ..... Paul Crowley
Gustavus Adolphus ..... L. W. McIntyre
Russalka ..... Sarah Stinchfield
Mona Lisa ..... Agnes Willis
Robert Burns ..... Bruce Miller
Columbia ..... Lillian McIntosh

Tableaux.

ableau 1	
Hugh Henry Brackenridge	Arthur B. French
Boys with Torches	H. C. Bernard
	Myer Slobodsky
	E. E. Coen
ableau 2	
Workmen	J. B. Miller
	G. R. Graham
	R. C. Greer
ableau 3	
Stephen Foster	A. P. Wright
Darkies	M. S. Hall
	J. S. McVey
	C. W. Bethune
Dog	E. F. Straw
ableau 4	
Victory	Florida Irvine
Soldiers	E. Sheinberg
	D. H. Anderson
	J. H. McKee, Jr.
	P. Ignelzi
	R. S. Hepps
	H. M. Robertson
	A. C. Eastman
	J. Lichtin
Drummer Boy	W. Z. Luther
ableau 5	
Samuel Pierpont Langley	G. R. Emery
Our Lady of Beatitudes	Hazel Keffer
ableau 6	
James Edward Keeler	H. S. Downing
Urania	Isabel Woodburn
ableau 7	
Angel of Peace	Carrie McClarren
	J. G. Wehs
ableau 8	
Justice	Matilda Moldenhauer
Capital	H. M. Conrad
Labor	Elmer Cole

Grand Tableau	
England	S. E. Hassel
	W. W. Armour
	W. E. Larson
France	Elnore Carhart
	Katherine Jorden
	Helen Frost
Germany	Theo. Manos
	G. McNary
	Paul X. Geary
Ireland	Lauretta Yohn
	Evelyn McCurdy
	Elizabeth Kennedy
Asia	Jagannath Khanna
	Kenichi Ban
	Wolfgang Bernard
The Slavs	Olive Carnahan
	Ella Cohen
	Helen Bowman
Scandinavia	Norbert Murphy
	John Dymock
	F. J. Regan
Italy	Gertrude Wuesthoff
	Elizabeth Schimmel
	Olive Neudorfer
Scotland	C. C. Schwerha
	W. R. Kerr
	Gordon Lewis

WEDNESDAY, FEBRUARY 28th.

This being the date of the actual one hundred and twenty-fifth anniversary of the granting of the first charter, the exercises were largely of an historical character.

The academic procession, consisting of delegates and guests, together with the trustees, faculty, and students of the University, formed at ten o'clock in front of State Hall, and led by the University band, marched to the Soldiers' Memorial, where the exercises were held.

The morning session was called to order by Mr. George H. Clapp, President of the Board of Trustees. The invocation was offered by Rev. Francis Brown, D.D., LL.D., President of Union Theological Seminary.

The first speaker was Hon. William Addison Magee, Mayor of Pittsburgh, whose address follows:

Mr. Chairman:

Never before in the history of Pittsburgh has there been exactly such an occasion and never before has our city been graced by an assemblage of educators distinguished by the number and eminence of those who have honored us by their attendance today. The anniversary is in a peculiar sense timely. It comes in the midst of an era—of which only a few years have elapsed—of wonderful activity among us in the field of learning. One of the most striking activities of Pittsburgh during the first years of the twentieth century is the advance in higher education; indeed, when the lapse of time will permit of a clearer perspective it may be recorded as the most significant phenomenon in the history of the period. Two great institutions of learning have been erected, each, it might be said, by a simple stroke; one conceived, born and matured almost in a single moment, the other experiencing a re-birth and such an immediate growth, enlargement and extension of its scope, and its ideals that bids fair or rather makes certain its entry in a few more years into the very first rank of its kind. The one is the realization of a dream of a benevolent and enlightened modern Croesus, the other is the creation of the people.

The event we are here to commemorate is a notable one. The occasion is auspicious and I am indeed proud of the honor which falls to me of being able to participate. It is my prov-

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FIRST DIVISION ACADEMIC PROCESSION

125TH ANNIVERSARY

UNIVERSITY OF PITTSBURGH

1. Mr. Stephen Thaw, Marshal.
2. Chancellor S. B. McCormick, University of Pittsburgh.
3. President Francis Brown, Union Theological Seminary.
4. Hon. William A. Magee, Mayor of Pittsburgh.
5. Senor Dr. Romulo S. Naon, Envoy Extraordinary and Minister Plenipotentiary from Argentina.
6. Chancellor J. H. Kirkland, Vanderbilt University.
7. Mr. George H. Clapp, President Board of Trustees, University of Pittsburgh.
8. Dr. W. J. Holland, Director Carnegie Museum, Pittsburgh, and Former Chancellor University of Pittsburgh.
9. Dr. Samuel Gibson Dixon, Health Commissioner of Pennsylvania.
10. Graf Johann Heinrich von Bernstorff, Ambassador Extraordinary and Plenipotentiary from the German Empire.
11. Dr. John A. Brashear, Former Chancellor, University of Pittsburgh.
12. President Thomas Fell, St. John's College.
13. Dr. N. L. Britton, Director-in-Chief of the New York Botanical Garden.
14. Dr. Ira Nelson Hollis, Harvard University.
15. Hon. Joseph Buffington, Judge of the Third Circuit Court of the United States.
16. Dr. Norman M. Duncan, Author.
17. Dr. Charles F. Scott, Yale University.
18. Dr. Robert Kennedy Duncan, University of Pittsburgh.
19. Provost Edgar F. Smith, University of Pennsylvania.
20. President John Grier Hibben, Princeton University.
21. Dr. James Ewing, Cornell University.
22. Mr. William Nimick Frew, President of the Board of Trustees of the Carnegie Institute of Pittsburgh.
23. Dean Henry Donald Campbell, Washington and Lee University.
24. Dr. Milton Jay Greenman, Director of the Wistar Institute of Anatomy, Philadelphia.
25. Dean F. P. Keppel, Columbia College, Columbia University.
26. Dr. Leland O. Howard, Chief of the United States Bureau of Entomology.
27. Dr. Albert D. Mead, Brown University.
28. Hon. David B. Oliver, President Board of Public Education, Pittsburgh.
29. President William H. S. Demarest, Rutgers College.
30. Principal William Peterson, McGill University.
31. President Henry T. Graham, Hampden-Sidney College.
32. Hon. J. D. Hancock, Franklin, Pa., Instructor in University of Pittsburgh, 1859-1861.
33. President James William Cain, Washington College.
34. Hon. David T. Watson, Attorney-at-Law, Pittsburgh.
35. President Eugene Allen Noble, Dickinson College.
36. Rt. Rev. Cortlandt Whitehead, Bishop of the Protestant Episcopal Diocese of Pittsburgh.
37. Dean Charles M. Snelling, University of Georgia.
38. Rt. Rev. Thomas J. Garland, Bishop Suffragan of the Protestant Episcopal Diocese of Pennsylvania.
39. Dr. Friedrich S. Archenhold, Director of Treptow Observatory, Berlin, Germany.
40. Rev. James Dobbyn, Oakmont, Pa.
41. Hon. William P. Potter, Associate Justice, Supreme Court of Pennsylvania.
42. Rev. Dr. Edward Hayes, Cumberland, Md.
43. Rev. Dr. J. K. McClurkin, Trustee, University of Pittsburgh.
44. Secretary S. B. Linhart, University of Pittsburgh.
45. Dr. Walther Riddle, Trustee, University of Pittsburgh.
46. Dr. Cyrus B. King, Trustee, University of Pittsburgh.
47. Dr. J. C. Wallace, Trustee, University of Pittsburgh.
48. Hon. John D. Shafer, Associate Judge, Court of Common Pleas of Allegheny County, and Dean of the School of Law, University of Pittsburgh.
49. Mr. W. Lucien Scaife, Trustee, University of Pittsburgh.
50. Mr. J. H. Lockhart, Trustee, University of Pittsburgh.
51. Mr. S. A. Taylor, Trustee, University of Pittsburgh.
52. Mr. J. C. Trees, Trustee, University of Pittsburgh.
53. Mr. Benjamin Thaw, Trustee, University of Pittsburgh.
54. Mr. E. V. Babcock, Trustee, University of Pittsburgh.
55. Mr. T. H. P. McKnight, Trustee, University of Pittsburgh.

ince to extend the felicitations of our people to this assembly and in their behalf I do most cordially welcome to our city the hundreds of distinguished men and women who have gathered here from abroad as well as from every part of our own land to join with us in celebrating a century and a quarter of existence of the University of Pittsburgh. The good wishes of the community also go out to the large and earnest student body and the learned faculty composing its organization. Congratulations are due those public spirited citizens who constitute the Board of Trustees, and thanks deep and sincere, beyond expression, to that great man who is the head of the institution. Formal speech is inadequate to acknowledge the debt of the University and the community to the matchless constructive genius of the Chancellor. Laboring day and night to the limit of his powers from year's end to year's end, directing the administration of its organization, amassing and assembling the resources necessary to its existence, he represents in his person and his life the spirit of the movement in our community which, I think, is evolving the leadership of knowledge for the future.

It should be marked that the coincidence of this anniversary with the tremendous forward bound of the University is a merely adventitious circumstance. It is appropriate that the natal day of the institution should be observed, but I take it that that event is only nominally the cause of this elaborate ceremony. It can be better construed as an occasion where a pause is called to take stock, to take an inventory of our condition, to look backward over the road that has been traveled, to survey the field and to consider the journey ahead.

Far be it from me to pretend to even a superficial knowledge of pedagogics, and I shall not assume to volunteer advice upon a scientific subject; but a public administrator cannot be insensible to a greater or less extent of the relation between education and public affairs and therefore I feel like venturing a few reflections that occur to me as bearing upon this relationship.

The two most palpable developments of the modern industrial state unquestionably are a fierce trade competition and an equal or more fierce striving for the ideal of democracy, namely, an equality of conditions for the individual. These tendencies do not run along parallel lines; in fact, generally the contrary. The reaction of the various forces engaged upon each other is the principal problem ahead of us. Both of these tendencies are rooted in conflict, and it is a beautiful example of

Emerson's theory of the law of compensation that on what appears to be the eve of "universal peace", of that day on which physical war should end, a war of industry and commerce should loom up that will not last for one or two years or engage two or three nations but will last for an age, be world wide in its operations and produce immediate and remote effects of the most profound nature upon the entire human race.

If education is that formal training by which the community undertakes to impose its culture and ideals upon the growing generation, then the condition of the body politic must be of vital concern to education. If our great nation is to continue to go forward in civilization at its steady and rapid pace it must not fail in the struggle for commercial success, and in order to hold its own it cannot admit its ideal or ambition to be the occupancy of any place below the first.

Formerly with few exceptions nations depended upon their natural resources for production and principally upon their domestic consumption for trade. While this may still prevail in fact no nation is satisfied with that alone. Beside being self-supporting and self-sufficient each country is now ambitious to measure its success by the amount of its surplus production and its exchange. To produce the more, to consume the less, to have the largest balance of trade has become the test of national prosperity. Such success may seem illusory, but it nevertheless is the fact. The way to the attainment of this kind of national mastery has been pointed out. When one considers the confined area and limited resources of the German Empire—a confederacy like our own—and makes due allowance for the superior character of its people, there is nothing more needed to explain its leadership than its system of education, elementary, manual training, technical and university. Its success is the more wonderful when further allowance is made for the handicap of a huge military establishment. The province of the University is, of course, the higher education, you will say; and what part does it play, and where can it aid in the war of trade competition?

Without attempting to be exhaustive one may suggest the tremendous importance of the science of economics. In the play of economic forces none are more obscure than those that result in what we call a "panic" due to variations in production, and the most sensitive relation between man and man and the one giving rise to the most friction is that arising over the distribution of the products of labor and wealth. No people

is so wasteful in the consumption of its wealth and none apparently seems—at least judging by results—to act so little upon sound theories of exchange. Here, I make bold to aver, is a fruitful field for the abstract study of principles and the teaching of rules for the practical guidance of the people of the modern industrial state that will go far towards making or marring the nation and all its constituent elements.

Now as industry and commerce must be supplied with a constant stream of workers adequately equipped in respect both of broad general culture and technical training, so also in an even greater degree does the popularization of modern political institutions require a superlative quality of leadership in public affairs. Democracy is bounding forward at a constantly accelerated pace. The striving for equality is unconquerable and continuous partial victories are inevitable. Regardless of opinion, it is useless to argue upon the main question. The only debatable issues are as to the form in which it is to find expression and the means and methods to be adopted. The science of government is like every other. Each new advance, every new discovery only widens the horizon. The people having seized the reins of power into their own hands will necessarily be compelled to pass upon and decide all common matters, great and small, from simple local ordinances to the most momentous issues of world policy.

In our country the invitation to enter the ranks of statesmanship is thrown out to every man, and with it goes great danger. The mass of the people, absorbed in their personal concerns unable to maintain a sustained interest in the common welfare, will hereafter more easily fall prey to the wiles of the demagogue and the doctrinaire. Government will ignore this situation only at the gravest peril. Instead of democracy requiring less leadership and direction than other forms of government it will require more. Instead of there being less of what we call "politics" there will be more; instead of government becoming more simple it will become more complex. "There is much to fear and everything to hope from democracy. Whether it shall destroy, whether it shall transform or whether it shall regenerate society" is the question. Human nature is the same now as ever. Vigorous, successful, self-ruled peoples of the past have come to grief. Democracy has been no exception to the rule that every kind of government has finally reached a crisis and changed its form. But a new element is infused into the modern element. Modern states

have universal elementary education. Political science now declares that the state educates not primarily for the advantage of the individual but for the good of the state itself.

But every man cannot become an advanced political scholar, and here is the opportunity of the University. Since there must be a political class, why not train it? Instead of letting it be recruited by chance out of any and every other occupation and profession why not raise it to the dignity of a profession itself? It is already such in countries with a different origin than ours; but I mean to go farther even than they.

Let us have a school where will be pursued not only the conventional political studies but those questions as well which are peculiar to democracies and to our own race and nation. For instance, no administrator can be successful with his projects without a strong public sentiment in his favor. Who has attempted to lay down any practical rules for the creation and guidance of public opinion? We see often a meritorious program of legislation, of public works or other public policy delayed for years. And why? Because of inertia, because of lack of co-operation between those who are interested, because of lack of courage of public officials, because of newspaper opposition inspired by selfish interests, because of rivalry for political leadership, because of narrow partisan and factional opposition.

Is it not time that a new study should be made of the principles underlying the right of free speech and the free press? Can these terms not be given a new definition in the interest of the public welfare? Is there not some suspicion that liberty is degenerating into license? Here is a practical political proposition affecting the fundamentals of government which the very circumstances of the case will prevent a solution of through the ordinary channels of public discussion.

Taking the question of admitting woman to the exercise of political privileges. This also is a question that has passed the period of serious debate. Having forced her way into the school and the workshop she will enter the polling booth when she so decides. It has been said that woman is emotional rather than intellectual. If this should remain true after she becomes man's equal, is it not high time to prepare for a new era in democracy when half of the electorate will be very largely moved by its feelings?

Questions intricate and many-sided are here and will constantly arise which will be more or less insoluble until the higher education has taken the lead and made an art out of political science. We cannot wholly leave matters to be decided by simple majorities. A majority of popular electors can be more tyrannical even than an absolute monarch because it is the last expression of physical force and when roused by passion has no sense of legal obligation and little even of moral responsibility. Illusions of feeling, of habit, of impatient impulse, jealousies of social and economic classes, rivalries between diverse religious beliefs and the ignorance of unassimilated races of foreign origin are elements existing in our body politic too dangerous to leave unregarded. And, the patent fact cannot be ignored that until democracy has more nearly approximated its final goal much passion, prejudice and envy will be aroused and accompany every important manifestation of its force. These feelings are its natural children. Liberty was attained and the struggle for equality was, and is being won only by force, by resistance and by opposition. Vested interests are being weakened and destroyed one by one with a strong hand, and no other could have been used for the purpose.

But the solution of the various questions arising over the re-adjustment—now that it is conceded that the battle is practically won—does not call for the denunciation and condemnation that seems to fill the air.

Granted that we must have further destruction, that the task is not completed, what about construction? The critical faculty being far in advance of the creative, it may well be curbed somewhat. Let us try to provide the men whose thoughts are concentrated on building up. Can education do anything to train men in the secrets of organization, of planning, of execution, of construction? Can initiative, ingenuity, courage and disinterestedness be consciously cultivated and trained? These are vital questions, for the country cannot live and endure simply antagonisms, objections and negations. The present trend of mind must give way to a formulated broad plan of positive constructiveness. For the tearing-down policy must be substituted one of gradual remodeling, and replacement of parts. How many things are there to be done, how many questions to be answered, how many problems to be solved? The answer is, countless numbers. The nation has

its problems, the states have theirs, each city, town and hamlet its own. Although the final answers must come out of the mass the proposals must come from the trained class; and the training should come from the University.

The theory of universities heretofore held was that they were matters of national concern and not local. With occasional exceptions they obtained their students from the classes blessed by birth or fortune. The latest conception of the higher learning is that it must be brought home to and thrown open to all the people. Not that all will accept it (at least under the prevailing social organization) but all who have the capacity and desire to receive it will have the opportunity. The modern university then with this aim will be the city university. As it will come from the mass of the people, and as the problems of the masses must be studied and solved in the great centers of population where they are found in their most diversified and acute form, so then must these public problems become eventually their principal and most advanced study. As classical learning succumbed to the physical sciences and as these have been supplemented by technical training so also must the science of economics and the science of government be given much wider scope and so also must they in turn include research and training in which the practical application of their principles will be taught to those who intend to devote their lives to the public service or to commerce. The usual outgrowth of the classical democracy was an aristocracy, and the need of the present democracy is a new aristocracy. Theirs was an aristocracy of privilege, of wealth, a hereditary class. Ours must be an aristocracy of intellect, renewed and fed each generation from the mass of the people.

Mr. Clapp then introduced as the next speaker Dr. Samuel Gibson Dixon, State Health Commissioner, and the representative at the Anniversary exercises of the Governor of Pennsylvania, the Governor being unable to attend in person.

Dr. Dixon's address was as follows:

Mr. Chancellor, Trustees, Faculty, Members of the Alumni, Students, Ladies and Gentlemen:

I have the great honor of appearing before you to bring our good Governor's greeting and to express his deep regret that official business prevented him from being with you on this your hundred and twenty-fifth birthday.

It is his fervent wish that you may continue your good work throughout this century that you are now in with even greater success than you have in the past, and it is his hope that the very atmosphere of the institution will impress the students with the importance of pursuing their studies with the idea of carrying their learning into everyday life.

Further, I know that it is his idea that the students should be impressed with the truth that the battle of life is not to be fought single-handed. Co-operation with our fellow beings is essential for the success of all human undertakings. Public duties should be studied by all men, no matter what their choice of profession may be; otherwise they must fail to represent the best influence for public good, particularly in a representative form of government.

Man should not live the best part of his life before he is made to realize that the fullness of his happiness demands that he shall not live for himself alone, but that many of his everyday duties must be beneficial to his neighbor; and possibly greater than all that, he must lead a life which is both honest and humane, otherwise his learning and his labors fall for nothing.

Life must not be looked upon as a war with our fellowmen. We must realize the necessity of being and must actually be our brothers' keepers. Individuals must take care of individuals, municipalities must work in the interest of each other and between these great United States of America there must be an unselfish bond of love and patriotism which the folly and selfishness of man cannot destroy. To bring about this ideal condition the student must not only be taught the theory of working in harness, but must be trained in school life to practice co-operation with his fellow students, so that it shall become to him second nature.

This venerable institution, like all great institutions, has had its ups and downs, and therefore it has learned better how to take care of itself now that it has become one of the first universities of the United States of America. And this, gentlemen, is saying a very great deal in this twentieth century when so many of the laws of nature have been unveiled by abstract workers and applied by the genius and science of invention, that the comprehensive work in many of your specialties in your University almost represents that of an entire university of a few centuries ago.

In this great center of industry your people see and realize the necessity of advanced education in the applied sciences and economics. It is possibly better demonstrated here than in any other city in the Union. It is this education which has advanced your schools so rapidly in the last few years and now when you have arrived at maturity the people of the Commonwealth, through Governor Tener and the legislators, have demonstrated their realization of the necessity of liberal government appropriations in order that future generations in this state may have all the advantages of thorough didactic and practical instruction to enable our centers of education to compete with older and heretofore richer institutions abroad. Every dollar spent on advanced practical education in this state will come back an hundred fold.

The German government awoke to this fact years ago and made it possible for their chemists to lead the world. Today that government is reaping a rich harvest from her liberal policy toward education.

The government's strong arm will enable the advanced teaching institutions to carry on their work regardless of the revenue derived from the tuition of the students. The schools, as well as the state, will have their monuments built by the thorough advanced teaching of the comparatively few among us who have enough natural ability to use the instruments of education given them.

Our advanced institutions of learning have in the past been compelled to keep the names of many students on their lists throughout their most advanced courses of study when it would have been better to have switched them off at a point which their natural ability indicated.

Those who are responsible for the expenditure of money given for educational purposes must first realize that too many "isms" must not be indulged in at the expense of those branches of study which will fit our graduates to pursue the practical vocations of life.

As the richness of our soils and the mineral deposits of the world are being used up the cost of living is becoming higher. Therefore our people must be educated so as to enable them to become greater producers; otherwise we will soon exhaust our principal.

The most hopeful sign of the present day is that a representative form of government has recognized the necessity of broader and more profound education and research work.

The present administration recognized our educational system and provided for the conservation of the health of the children so that they might not only receive better educations, but at the same time have their learning stored in healthy bodies that they may live for years to enjoy the fruit of their labors and return to the public *quid pro quo* for their educations and the preservation of their lives.

Located where the waters of the north meet the waters of the south to form the mighty Ohio, extending the natural facilities for commerce which led our forefathers to establish here the military and trading post, famous in history as the gateway to the Golden West, your university has kept pace with the growth of a wonderful city, whose industry, commercial energy and wealth, combined with your intellectual acuteness, and your practical sense, assures your continued prosperity and advancement as a great institution of learning.

Extending again to you the greeting of His Excellency, the Governor, I desire to express my cordial individual good wishes for your increasing success and usefulness.

Mr. Clapp next introduced Dr. James Hampton Kirkland, Chancellor of Vanderbilt University, who spoke as follows on the subject, "Progress in Higher Education since 1787."

Mr. Chancellor, Ladies and Gentlemen:

My theme has essential limitations: in subject matter, to colleges and universities,—in time, to the life period of the institution whose birth we celebrate today. A strict adherence to these limits is hardly possible. There can be no consideration of higher education without a conscious background of other educational agencies and forces with which higher education is closely connected. Again, the college of 1787 can only be understood by reference to the educational history of one hundred and fifty years preceding. But still there is a justification for my theme and it has in itself a certain unity and definiteness. It was not a great while after the Revolutionary war until American colleges developed a type different from that of the colonial period. This type of institution we shall discuss under the title of The Old College. From about the year 1870 to the present we have seen the extensive development of The New American College, and during the same period occurs the evolution of The American University. It is, therefore,

under these three general heads that I shall treat my subject this morning.

The first period into which we have arbitrarily divided our sketch of Higher Education extends from the beginning of the nineteenth century till about 1870. In this period the old-fashioned college labored and flourished,—an institution peculiar to America, one which took a firm hold on our social life and thought and has endeared itself to all classes of our citizens. The name of the institution was not significant—it might be college or it might be university,—there was no difference in substance. State institutions as a rule preferred the more ambitious title, and some of them in the course of time justified their name by a wider circle of professional schools, but this was not an essential part of the original plan. All these colleges developed along similar lines and grew to one type. There was large uniformity in admission requirements and in the content of the curriculum. The degree of A. B. was given after four years of work. The course of study was rigidly prescribed, based on Latin and Greek as fundamentals, to which were added English Literature and Rhetoric, Mathematics, Logic and Philosophy, with a small amount of science, generally known as Natural Philosophy, and a little History.

But educational institutions and methods must at least reflect the larger life about them; and so the ideals and methods of the old college felt the impulses that were transforming our national life in this period. In these movements I single out three of great prominence: (1) Territorial enlargement, (2) Scientific and commercial expansion, (3) The growing spirit of Democracy.

Let us consider the effects of this political, social and scientific development on the American College.

First of all, it caused men to see the defects of the existing system, and with this vision came efforts to correct and improve. The decline of the college as a school for professional training led to the establishment of special institutions for training in theology, medicine, and law. But this tendency went still further. As knowledge increased there was found need of expert scientists, and technical schools of varied character were brought into being to meet this need. The deficiencies of the college curriculum became also more apparent as the world grew larger. Old subjects demanded expansion, and new subjects clamored for admission. The curriculum

became uncomfortably crowded and this produced superficial work.

The most notable deviation from current educational systems was the plan adopted in the founding of the University of Virginia. Without entering into elaborate details, I may quote the following analysis of Jefferson's views made by Prof. H. B. Adams.

"(1) The abolition of a prescribed curriculum for all students and consequently the overthrow of the class system.

"(2) The introduction of specialization, or, as Jefferson phrased it, 'exclusive application to those branches only which are to qualify them (students) for the particular vocations to which they are destined'.

"(3) The elective system or 'uncontrolled choice in the lectures they shall choose to attend'.

"(4) The reduction of discipline to a minimum, 'avoiding too much government, by requiring no useless observances, none which shall here multiply occasions for dissatisfaction, disobedience, and revolt', etc."

Change from the Old College to the New College.

Let us consider now somewhat more systematically the changes by which the old college has been transformed into the new. This brings us at once into modern times; for while there were advance movements in the earlier days, the general transformation of the American college has been the work of the past forty years. The special changes I have in mind may be enumerated concisely as follows:

(1) The requirements for admission have been both elevated and systematized. This has been made possible only through the development of the public high school. Since 1870 new subjects have been generally added as follows: Modern Languages, English Literature, English Composition, Science. Instead of the old system of required subjects, a certain amount of electives became necessary even at the college door. This led to the adoption of the system which was the forerunner of the present system of units. The method of admitting students from accredited schools came into vogue first with the state universities of the Middle West, and bids fair finally to win out over all other methods of admission.

(2) With the changes in requirements the age of Freshmen has increased, and there has also been brought about for other reasons marked changes in student life and government.

(3) The course of study has been generally enlarged. This has brought about a general system of electives or a system of parallel courses. More has been done in this direction since 1870 than was done in the two hundred and fifty years preceding that period. The extreme to which this tendency may go was seen in the adoption by the trustees of Cornell University of a phrase of Ezra Cornell as a kind of motto: "I would found an institution where any person can find instruction in any study." Though this ideal has not been reached at Cornell, or elsewhere, it has been approximated at a number of institutions.

(4) While the infinite number of courses has not been an unmixed good, great improvement has certainly been effected in methods of work. This statement applies to every department and may be verified roughly by a comparison of modern text books with those of fifty years ago. In scientific work the changes have been revolutionary. Now student laboratories are universal and no college may pretend to give scientific instruction without them. Libraries also have grown immensely in size and usefulness. By improved methods of cataloguing and administration they are made the workshop of every professor and of every student.

(5) The personnel of the faculty has also largely changed. While we still reverence the names of many of our great teachers of early days, we must believe that there has been a distinct elevation of the profession as a whole. German ideals of scholarship have taken hold on all our colleges. The first evils of such a system have been felt in an overestimate of research work and in an attempt to introduce university methods into younger college classes. But we shall react from this error and we shall find a way to preserve scholarship without pedantry, and keep learning in college walls without forgetting the learner.

(6) Last of all I mention the change in college resources without which none of the things already mentioned would have been possible. Since 1870 our country has prospered almost beyond our dreams. Great wealth has accumulated in private hands and the states have had large resources for public needs. Colleges and universities have been especially favored as objects of bounty. The figures when summed up as totals seem almost startling, but if distributed among all colleges would not be so very large, and would seem indeed quite

small if we take into consideration the number of beneficiaries, —the vast and increasing multitude of students that have to be cared for. The richest of our colleges have property amounting to about three million dollars and an annual income of about two hundred and fifty thousand; many are doing most creditable work on less than half that sum. Of course I am speaking now of colleges or of college departments, and not of universities with their multiplied demands for technical and professional training. When we consider the history of American colleges for the past two hundred and seventy-five years, when we reflect on the greatness of their work, the character of men engaged in it, the results accomplished in the life of our nation, and the uplift of society, we may fairly claim that no expenditures in our country's history have brought such large returns or made such magnificent contributions to public and private welfare.

The Present College Problems.

The development of the American college in the past forty years has brought many problems to the front and has been the occasion of prolonged and serious discussion. The college journals, official presidential reports, educational magazines, daily newspapers, and all forms of fugitive literature, have taken part in the conflict. Questions have been raised regarding the purpose, the plan of organization, and usefulness of the college. At the time and in some quarters it seemed that an attack was to be made on its very existence. While these problems have not all been solved, it may be conceded that we have reached relatively stable ground, we are nearing definite results and are working our way toward agreed conclusions on at least a few points. As some of these questions affect the fundamental character of the college, we may allude to them, even if briefly.

(1) Admission to college: We have reached the definite conviction that students should be admitted to college only after the completion of a high school course of four years covering work amounting to fourteen or fifteen units.

(2) Perhaps the greatest struggle has been carried on in reference to the curriculum, the introduction of new subjects, the subdivision of old, the grouping of studies into parallel courses, or the adoption of a system of free electives. This debate has had many phases. At one time the heat of conflict

raged around the classics, at another around the historic value and sacredness of the A. B. degree. The whole question is older than 1870. It was foreshadowed in the early history of the University of Pennsylvania and of William and Mary College, and brought distinctly to the front in the founding of the University of Virginia. Since 1870 it has forced itself on the consideration of every college faculty. Harvard has been the center of the liberal influence and President Eliot the great advocate of personal freedom. While there is still much division as to details, there are some broad conclusions that have been established and are generally accepted. (a) The rigid college course is gone and and no one wishes it restored. (b) New subjects and new courses have been introduced by every college to the extent of its financial ability, and even beyond. No questions of theory have restrained any of us; our limitations are financial alone. (c) The extent to which the individual student shall be allowed to elect his work is still under discussion and no agreement seems near at hand. Diversity of practice continues and will continue. (d) The typical course is to occupy four years, but many students will accomplish it in three. (e) The degree of A. B. is already permanently changed in character. Some institutions may continue to give B. S., but B. L. and Ph. B. manifest no signs of permanence.

(3) A special group of problems has arisen in connection with the size and material resources of colleges. The demands of modern life are imperative. No college can meet the conditions of today with the resources and equipment of half a century ago. A college may voluntarily choose a path of renunciation, may refuse to introduce some new subjects or to go to extremes in subdividing old ones, but no college can escape the financial burden involved in providing certain essential laboratories, scientific equipment, and a well filled library carefully administered.

Summary.

If we now try to sum up our brief discussion of the Modern American College, as distinguished from the types of earlier days, we reach the following conclusions:

(1) The modern college is the successor of the old college as our typical educational institution and has inherited all the respect and affection bestowed on that institution for hundreds of years.

(2) It has ceased to be vocational in the sense in which earlier institutions were. Of Harvard graduates from 1875 to 1885 fully one-third entered none of the learned professions. A recent class of Harvard College made the following returns as to probable professional careers: Business, 31 percent; law, 23 percent; engineering, 12 percent; teaching, 10 percent; medicine, 9 percent; journalism, 4 percent; architecture, 3 percent; chemistry, 3 percent; the ministry, 2 percent.

(3) The college has relaxed some of its claims for the supremacy of mental discipline and has definitely abandoned its rigid curriculum for securing the same. For discipline it has substituted the word culture, returning to the humanitarian ideas of the Renaissance, and it now makes this the chief end of its being.

(4) This work of liberal culture is entirely within the reach of small, detached colleges; and indeed they have many advantages for such work which they have not been slow to herald abroad and which strengthen them in the unequal competition with large unversities. Their rate of growth in recent years has been more rapid than the rate of increase in population, though not equalling the rate of increase in large state universities.

(5) There has been a tremendous growth of non-scholastic interests in college life. These interests attract students more than scholarship. And yet they have not been properly organized and vitalized with the spirit of culture. College faculties have been very busy about many things and very unconcerned about those things to which students have been giving most of their time and thought.

(6) The idea of culture has been perverted. The report of the Harvard faculty in 1904 says, "The easiest way to induce students to take a subject for culture is to make it not too difficult". There is some ground of truth even for the bitter criticism of Birdseye.

(7) A reaction is, therefore, under way in the colleges attached to large universities by which the college course is assuming again a vocational aspect and relating itself to the life activities of the individual students. In the same spirit the last years of the college course are dovetailed into the professional schools, so that in effect the college course is shortened one year. This is developing a type of college different from anything heretofore known and increasingly popular. Between this university-college and the detached college of strict-

ly cultured ideals differences are likely to increase. It is not possible at the present moment to forecast the outcome of this issue or indicate possible modifications and compromises in the evolution of both institutions.

The mention of this last item brings us by natural transition to the consideration of

The American University.

This institution has within the present generation rapidly assumed a definite form and type. This type differs essentially from that of the historic English universities and equally so from those of Germany. Some years ago Dr. Von Holst delivered an address and published an article on The Need of Universities in the United States. In this article he took occasion to deny the existence of any university in this country. Practically the same position was taken by Dr. Burgess of Columbia University in his paper published in 1885, already quoted from, on "The American University. When shall it be? Where shall it be? What shall it be?" We may at once frankly admit that the German university does not exist, because the social order out of which that institution sprung is foreign to us. But there is no necessity for adhering to the order of things that requires all universities to be molded after the German type. That type itself is an evolution, reflecting social and intellectual changes. Prof. Paulsen well says, "I have repeatedly pointed out that the classification of the faculties was not made from the view point of a theoretic division of the sciences, but developed out of social necessities and historic conditions. Society needed and still needs scientifically trained clergymen, judges, physicians, and teachers. Thus regraded, the university is nothing more than a loose coördination of professional schols". In view of these facts we have no apology to make for our present use of the term *University* to describe the highest class of our educational institutions, a form of development that has taken place within the life period of the New American College, and is in fact associated with and dependent on that very evolution of the college already described. In a brief sketch of this American university popular imagination seizes on a few marked characteristics. These institutions are uniformly of great size and of immense resources. Their development has been in the main quite rapid, and they have included under one organization a great diversity of educational interests and activities. Further, in

almost all cases they have been built up around the American college and include this as one of the most important parts of their organization. These characteristics may be illustrated by a few statistics. Attendance on our larger universities has risen rapidly within the last decade. Institutions having above four thousand students are quite numerous, and more than five thousand are reported from Pennsylvania, Minnesota, Michigan, Illinois, Chicago, Cornell, and Columbia. Columbia has an enrolment of seven thousand nine hundred and eighty-one in the catalog of 1911-1912. But in 1885 Minnesota was reported as having only fifty-four students, Illinois only two hundred and forty-seven, Michigan five hundred and twenty-four, and Wisconsin three hundred and thirteen. The income of Columbia in 1909 was $2,207,501. Quite a number of state universities have an income exceeding one million dollars. Such are California, Cornell, Illinois, Pennsylvania, Michigan, Minnesota, Wisconsin. Seven institutions report endowments exceeding ten millions, and thirty-seven between one and ten millions. All the better class of state universities have possible resources from state taxation equal to many millions of endowment. The writer of the article on Education in Appleton's Yearbook for 1910 says, "Practically there are at least ten institutions of higher learning of first magnitude in this country, and at least thirty others that are well equipped for modern requirements". In view of these facts we may agree with the statement on this subject in the Second Annual Report of the Carnegie Foundation: "We may say with confidence that since 1870 there has been developed in the United States a distinctive form of university, similar in its organization to the German University, consisting of one or more colleges upon which a graduate school of Philosophy is superposed and with professional schools likewise resting on the colleges related to them".

Let us examine now some of the influences at work molding and shaping these American universities, some of the tendencies represented in their growth and organization.

1. They represent in their college departments the extreme movement for enlarging the curriculum. This phase of development especially characterizes state universities.

2. The great state universities have led in the movement for scientific technical courses parallel with or part of the college course. The need of such technical instruction stimulated the founding of special schools of applied science of technol-

ogy. Then came the association of such work with existing institutions, as in the Lawrence School at Harvard and the Sheffield School at Yale. But the most effective impulse in this direction came with the passage of the Morrill Act in 1862. A number of our strongest state universities owe their origin to this act.

3. Another movement of great significance has been the development of graduate courses of study in connection with research work of a high character. Definite departments for this purpose have been built up only since 1870. The founding of Johns Hopkins University marks an epoch in this field. The whole movement is an index of the influence of German universities on the higher education of America, and has been extended by men who were themselves trained in German universities. Year by year the number of students seeking such instruction has increased.

4. Universities have also in the recent past become the homes of great professional schools. The development of colleges as instruments of general culture stimulated the establishment of special institutions for the higher professions of theology, medicine and law.

5. As the last distinctive tendency of the modern American University, mention may be made of its development as an instrument of service for the larger public outside its walls. This service is rendered in innumerable ways and under a variety of names. In educational lines the university stimulates, develops, organizes, the whole educational system of the state. In the field of general culture it maintains courses of lectures, organizes reading circles, builds up the intellectual life of the city where it is located. Its laboratories of science are busy with the problems of its own environment. The great state universities of Illinois, Michigan, Wisconsin and others make a marvelous showing of contributions made to the agricultural and commercial welfare of the state. The improvement may be in a new variety of seed, a new method of cultivation, a successful manner of resisting some insect enemy, as the white scale or the boll weevil, or in a new scientific invention or discovery. These contributions may come also through publications—literature sent out on social and economic questions. In a thousand ways the modern university seeks to make itself the leader of thought and of action, and at the same time the servant of all. This explains the great and

growing value of such an institution to the state or to a city where it is located.

Our hasty survey has reached its end and limit. The story told in simplest form and phrase is one to excite the wonder and admiration of all men. It is in keeping with the great movements of history on this American continent. Our institutions of higher education measure and gauge the intellectual life of our people. They are at once the record of our past and the hope and prophecy of our future. As they are strong so shall be the strength of our nation; as they fail so shall disaster encompass us.

One hundred and twenty-five years ago a charter was granted to Pittsburgh Academy to carry on its work for the community that surrounded it. Faithfully and persistently it has rendered its service during all these years. It has used wisely such means as were placed in its hands, but it has been sparingly fostered. Within the past few years the state of Pennsylvania and the city of Pittsburgh have asked questions as to their duty toward the institution. To ask such questions is to find answers ready at hand. This city of limitless wealth, the exponent of commercial greatness, the beneficiary above all others of the wealth that has come from scientific progress of recent years, will not withhold its contributions from an institution asking only the privilege of service and promising such rich returns from every gift. Today we celebrate a birthday, but our thoughts turn not to the past alone. We look down the vista of the coming years and see a new and greater University rising on these hills, lifting with the power of eternal might the life of this community and crowning all this commercial greatness with the richest endowment of truth and the perpetual blessings of intellectual and spiritual freedom.

Conferring of Honorary Degrees.

At the conclusion of Dr. Kirkland's address, those receiving honorary degrees were presented in turn, as follows, and the degrees were conferred by Chancellor McCormick.

Graf Johann Heinrich von Bernstorff,
Ambassador Extraordinary and Minister Plenipotentiary
from the German Empire.
Doctor of Laws.

Presented by Dr. W. J. Holland.

Mr. Chancellor: On behalf of the Trustees and Faculty of the University, I have the honor of presenting for the degree of Doctor of Laws, His Excellency Graf Johann Heinrich von Bernstorff, Ambassador Extraordinary and Minister Plenipotentiary, representing in this country his Majesty the Emperor of Germany, that great nation with which this country has always been at peace, from which we have now some of the best blood in the veins of our people, and to which we are indebted for some of our highest educational ideals. He belongs to an ancient house, conspicuous for its devotion to philanthropy and to learning, and for his own attainments is worthy of the very highest honor which can be bestowed upon him in the republic of letters.

Following the conferring of the degree by the Chancellor, Graf von Bernstorff responded as follows:

Mr. Chancellor and Trustees, Ladies and Gentlemen:—

I beg to express my most sincere thanks for the privilege of appearing before you today. It is always a great pleasure for me to return to this wonderful city of Pittsburgh, where I have always received such a warm and kind reception. I very much appreciate the great honor which has been bestowed upon me today by the conferring upon me of the degree of Doctor of Laws, which brings me into lasting connection with this celebrated University of Pittsburgh, which, under the guidance of its distinguished Chancellor, has become a center of light and inspiration to all mankind and which holds up to its students the ideals of a high and splendid life. I realize to the full that in conferring this high honor upon me the University is less prompted by the desire to recognize my small personal merits, than to give a token of its friendship to the nation which I have the honor to represent. Such friendship is all the more natural here in Pittsburgh, where so many descendants of the old German stock have found a new home and now form a natural bond of an ever-increasing friendship between the United States and Germany.

The exchange of professors which has so happily been instituted between American and German universities has recalled to our mind a fact to which the distinguished speakers today have often referred, that in former days the American universities had learned much from their older German sisters, and that today, while the American universities have attained a position which commands the admiration of the whole world, there is very much to learn by each from the other. Amongst the forces making for good will, intimate knowledge of their faculties is one of the foremost. If we are truly at one in the spiritual life of our two nations we shall be very quick to recognize their interdependence and to do everything we can to promote their friendship. This view has been taken especially of the exchange of professors in Germany, where the universities have from the days of their birth always been the first representatives of the nation's ideals. The nascence of Prussia after the collapse of 1836 was primarily but the work of the University professors, among whom were such men as Fichte, Haupt, and Niebuhr. This has given the universities also some of the higher promoters in all questions of the day, and in every matter that comes up in my country one always sees the universities leading. The University of Berlin has especially led in this movement for promoting intercourse between the universities of the United States and Germany.

I will close my few remarks with the expression of the hope that the intercourse and friendship between the universities of the United States and of Germany may always increase.

Senor Dr. Romulo S. Naon

Envoy Extraordinary and Minister Plenipotentiary from Argentina

Doctor of Laws.

Presented by Dr. W. J. Holland.

Mr. Chancellor, it gives me peculiar pleasure to present for the degree of Doctor of Laws His Excellency Senor Dr. Romulo S. Naon, Envoy Extraordinary and Minister Plenipotentiary from Argentina, that great republic of the far south which today is one of the wonders of the world and in which the development of natural resources has gone hand in hand with the development of learning and scientific culture. His Excellency not only represents a great country on this occasion,

but a great university, that of Buenos Aires, in which he holds the Chair of Constitutional Law.

Senor Naon's response follows:

Mr. Chairman and Gentlemen of the Board of Trustees:

Let me express to you the profound gratitude with which I receive the high honor your University has conferred upon me. I appreciate, in its full significance, this distinction and understand also, as a University man, the intellectual and moral responsibility which accompany the degree when it is conferred by an institution whose history, as that of this famous University during the hundred and twenty-five years of its life, is a history of undisputed and indisputable efficiency in the aggrandizement of the greatest republic the centuries have ever produced.

I feel myself indissolubly united with the destinies of the University of Pittsburgh. I am a citizen of a nation which follows with deep interest the marvelous development of your nation. Both countries are drawn toward each other by similar historical antecedents, and day by day they are drawn yet closer in the progress of their reciprocal commercial relations, relations which I hope to strengthen in the discharge of my duties, until the bonds which have bound, which bind us, and which, please God, ever shall bind us, attain to the fullest measure of efficiency which their deep-rooted sympathy and common ideals and interests demand.

I have always believed that the enormous industrial progress of this mighty nation, for which my Fatherland professes ingenuous and hearty admiration, is due, in great part, to its magnificent universities and scientific schools. These have cultivated the intelligence of the people and have invigorated the power of ideas, thus insuring the most intelligent and therefore the most intense and fecund industrial activity that has ever been developed in any nation.

More than once, I, who earnestly desire that my country may realize, as has this, her mighty sister and model, her highest mission in the history of human civilization and progress, have been thrilled with the admiration which her enormous potency awakens when it has been my privilege to lay before my own countrymen the practical results of the noble efforts which the American universities achieve in their aspiration to enlarge, even more, the moral influence of the great republic.

It is easy to realize that at present those efforts are taking new roads. It seems not to be enough for American thought to investigate her own problems separate from the outside world; the development of her material resources obliges her, also, in order that she may continue her progress, to take part in the investigation of the phenomena lying outside her own borders. The American professors are beginning now, with the same efficiency they have aways manifested, to carry out, in a practical way, the interchange of ideas and to investigate the phenomena of an economic, social or political nature which occupy the attention and the activities of other peoples, to associate them in the development of her own national greatness. In their desire not to lose any element of practical judgment, any point of view which may contribute to the resolution of these problems, the universities of the United States are bringing from other countries the most famous professors, in order to secure the help of the ideals of others, not only many times distinct, but seemingly, sometimes, antagonistic, on account of temperament, environment or local interest. These efforts, which indicate profoundly patriotic and moral, as well as practical sense, will familiarize, at the same time, other peoples with the humanitarian attitude of this great republc, a feature until now many times misrepresented, thus serving to bind together and to solidify the efforts of all peoples in reciprocal benefits, in increasing production, aiding and perfecting and enlarging the exchange, augmenting the comfort and relieving the sufferings of mankind.

And certainly, gentlemen, this new phase of the efforts of the American universities must give to the nations of the earth a new concept of the American people as a whole, exalted and noble as this has ever been. It must happen that its ideas, sentiments, and ideals will be diffused and applied in all lands where progress and civilization seek solid foundations and fruitful results.

Gentlemen. Yonder in the southernmost extreme of the American continent, there lies another Fatherland, which was born out of the same sentiments which gave birth to the United States of America; another Fatherland based on the same fruitful principles of civil liberty and political honesty which Hamilton and Madison, and Jay proclaimed in "The Federalist"; another Fatherland which reveres, essentially, her constitution and her banner, and which strives to be a positive ele-

ment of progress in the development of human civilization. That Fatherland watches constantly, with deepest concern and fraternal pride, your marvelous development along the many lines of your activities; feeling herself, that your present attainments will be her near great future. That Fatherland is mine, and with its name "Argentina" are implied the ideas of the wonderful riches of her soil, the generous character of her principles and ideals, the activities and energy of her sons, along with the unsurpassed achievement she has attained in the recent past!

I express my great desire, gentlemen, for the interchange of professors, which other American universities as well as European universities have already initiated with ours, that it be taken up by the University of Pittsburgh. In this way your teachings, and your scientific point of view, will be utilized by our universities, and your name, honored and respected as it is in the history of American progress, will also be honored and revered in the history of Argentina's progress.

Ladies and Gentlemen. In behalf of the University of Buenos Aires, which I have the honor to represent, it gives me profound pleasure to bring greetings to the University of Pittsburgh, on this, the glorious day of her one hundred and twenty-fifth anniversary; and my prayer is, that each new step of her life in the future may be a triumph for her, and a larger progress for the civilization of America.

Ira Nelson Hollis

Professor of Engineering, Harvard University, Cambridge, Massachusetts.

Doctor of Science.

Presented by Dr. John A. Brashear.

Mr. Chancellor, I have the honor and the pleasure to present Dr. Ira Nelson Hollis for the degree of Doctor of Science. Dr. Hollis represents the oldest university in the United States; the university, I am proud to say to the boys of the University of Pittsburgh, that gave us our Langley. Dr. Hollis was from 1880 to 1893 interested in the work of the Navy, a naval engineer; and so valuable was his work that he was elected to the professorship of engineering in Harvard College. He has been there since 1893, and I am quite sure that we are proud to have him come to us, and be honored by a degree which honors us.

Thomas Fell

President, St. John's College, Annapolis, Maryland.

Doctor of Laws.

Presented by Hon. John D. Shafer.

Mr. Chancellor, it gives us pleasure to have with us today the President of St. John's College, Annapolis, Maryland, which is one of the two or three colleges of the United States founded in the seventeenth century, which is for us a hoary antiquity. He is not less honored by us because, like the founders of his college, he was imported from England. His educational activities have reached far beyond the bounds of his college. I have the honor to present for the degree of Doctor of Laws, Dr. Thomas Fell, President of St. John's College, Annapolis, Maryland.

Charles Felton Scott

Professor of Electrical Engineering, Yale University, New Haven, Connecticut.

Doctor of Science.

Presented by Dr. John A. Brashear.

Mr. Chancellor, I present to you Mr. Charles Felton Scott, of Yale University, for the degree of Doctor of Science. I have a paper here that tells me something about Mr. Scott, but I have the pleasure and the really satisfactory knowledge of personal acquaintance with Mr. Scott's work. For twenty-three years he was the representative of university education at the Westinghouse works in Pittsburgh, and I know that no man has contributed to the scientific side of that great work more than our good friend Mr. Scott. Not only that: he has been interested in all educational work in the city of Pittsburgh, associated with the development of clubs, with the development of technical interests connected with the work. And while the only grudge we have against Yale University is that of taking him from us, we are glad to have him back with us to honor him with this degree.

Edgar Fahs Smith

Provost, University of Pennsylvania, Philadelphia, Pennsylvania.

Doctor of Laws.

Presented by Dr. W. J. Holland.

Mr. Chancellor, I have the honor of presenting for the degree of Doctor of Laws the head of our sister university at the eastern end of the state, Provost Edgar Fahs Smith; a man of distinguished scholarship, of the highest executive ability, who has again and again received the highest academic honor, and whom we desire to bind to ourselves as one of our honorary alumni, because there is no man in the great city where he lives with whom we would rather claim fraternal fellowship. While my own personal acquaintance with him is not as intimate as your own, Mr. Chancellor, I know well the pious people from among whom he sprang. Dr. Smith, my father was your father's pastor, and your uncle was my boyhood friend.

John Grier Hibben

President, Princeton University, Princeton, New Jersey.

Doctor of Laws.

Presented by Dr. W. J. Holland.

The ones who first bound us to Princeton are all dead. The first Act of Incorporation for the Pittsburgh Academy was secured for us by Hugh Henry Brackenridge, who was graduated at Princeton, in 1771, in the same class with James Madison, Philip Freneau and other men who became renowned. Four of the first trustees of that old Academy were alumni of Princeton. One of the first teachers had himself been a pupil at Princeton. So it has been through all these long years. We desire Mr. Chancellor, to bind the President-elect of good old Nassau to us today in the bonds of fraternal fellowship by adopting him as a son of this University. I have the pleasure of presenting to you on this occasion Dr. John Grier Hibben, who deserves not only this degree but any other degree which this University could bestow upon him.

Henry Donald Campbell

Dean, Washington and Lee University, Lexington, Virginia.

Doctor of Science.

Presented by Hon. John D. Shafer.

Mr Chancellor, it gives me great pleasure to present to you for the degree of Doctor of Science, Professor Henry Donald Campbell, who for many years has been professor of geology and biology at Washington and Lee University, and is the Dean of the Collegiate department of that ancient university. In honoring him, and through him the institution which he represents, we do ourselves honor.

Frederick Paul Keppel

Dean of Columbia College, Columbia University, New York City, New York.

Doctor of Letters.

Presented by Dr. John A. Brashear.

Mr. Chancellor, I have the honor to present to you for the degree of Doctor of Letters, Dean Frederick Paul Keppel, of Columbia University. All his students here feel greatly indebted to the work of Dean Keppel and his colleagues in the great Columbia University. For we have sent there forty-two of our teachers, and every one of them has "made good" in such a way that every other teacher in Pittsburgh wants to go to Columbia. I present him with the hope that he will not only remember the University of Pittsburgh, but that we will always honor Columbia.

Albert Davis Mead

Professor of Comparative Anatomy, Brown University, Providence, Rhode Island.

Doctor of Science.

Presented by Dr. John A. Brashear.

Mr. Chancellor, I have the honor of presenting for the degree of Doctor of Science, Professor Albert Davis Mead, who represents Brown University. Since 1895 he has successfully imparted instruction to large and enthusiastic classes in com-

parative anatomy and biology, and has devoted much time to the study of the marine and fresh water fauna of the New England states. He is a member of the learned societies of Europe and America, and we are glad to have him an honorary member of the University of Pittsburgh.

William Henry Steele Demarest

President, Rutgers College, New Brunswick, New Jersey.

Doctor of Laws.

Presented by Hon. John D. Shafer.

Mr. Chancellor, I present as the representative of Rutgers College the Rev. William Henry Steele Demarest, who represents in his person a commingling of the blood of liberty-loving Dutch and Huguenot ancestors and from whose faith he has not departed, having filled the chair of ecclesiastical history in the theological seminary of the Reformed Church before becoming the President of Rutgers.

Henry Tucker Graham

President, Hampden-Sidney College, Hampden-Sidney, Virginia.

Doctor of Divinity.

Presented by Dr. W. J. Holland.

Mr. Chancellor, when our forefathers were engaged in the mighty task of securing the independence of this nation, it happened that the men in Virginia had time to think of the cause of education; and in the year 1776 they founded Hampden and Sidney College. I have the honor of presenting for the degree of Doctor of Divinity, the Rev. Henry Tucker Graham, President of that venerable institution, who has done a great deal for sound learning in the Old Dominion. He is a fellow-clergyman who has served his church well both at home and abroad. I present him to you, sir, for the degree of Doctor of Divinity.

James William Cain

President, Washington College, Chestertown, Maryland.

Doctor of Laws.

Presented by Dr. John A. Brashear.

Mr. Chancellor, I have the honor and the pleasure of presenting to you for the degree of Doctor of Laws, President James William Cain, who from 1892 to 1893 was the Vice President of St. John's College, Annapolis, and who since that time has been President of Washington College, Chestertown, Maryland. Dr. Cain is an eminent and successful educator and we will honor ourselves by conferring upon him this degree.

Eugene Allen Noble

President, Dickinson College, Carlisle, Pennsylvania.

Doctor of Laws.

Presented by Dr. W. J. Holland.

Mr. Chancellor, the name of John Dickinson, who has been styled "The Penman of the Revolution" is written large in the early history of our country and of our state, and is borne proudly today by the institution which he was largely instrumental in calling into being upon the advent of peace in the year 1783. We welcome with pleasure the recently elected head of our sister institution, and I have the honor of presenting him to you for the honorary degree of Doctor of Laws, which he richly deserves.

Charles Mercer Snelling

Dean, University of Georgia, Athens, Georgia.

Doctor of Science.

Presented by Hon. John D. Shafer.

Mr. Chancellor, from what seems to us the far south—but which he will probably not admit to be such—from the youngest of the thirteen colonies, we have the honor of welcoming the President of Franklin College, founded in 1785, the nucleus out of which the University of Georgia has been evolved. He is also the Dean of the Faculty of the University of Georgia. We welcome him as the representative of the New South and I present him to you for the degree of Doctor of Science—Charles Mercer Snelling, President of Franklin College and Dean of the Faculty of the University of Georgia.

James Hampton Kirkland

Chancellor, Vanderbilt University, Nashville, Tennessee.

Doctor of Laws.

Presented by Dr. W. J. Holland.

Mr. Chancellor, in the year 1787 there were only three spots in the trans-Allegheny wonderland where the torch of learning had been lighted. One of them was at the forks of the Ohio. Another was at Lexington in Virginia, now Kentucky. The third was at Nashville, North Carolina, now Tennessee. I have the honor of presenting to you a man who needs no introduction before an audience which he has charmed and instructed and inspired by his eloquence—Chancellor Kirkland, of Vanderbilt University. I present him, sir, for the honorary degree of Doctor of Laws.

Nathaniel Lord Britton

Director-in-Chief, New York Botanical Garden.

Doctor of Laws.

Presented by Dr. W. J. Holland.

I have very great pleasure in presenting for the honorary degree of Doctor of Laws, Nathaniel Lord Britton, Director-in-Chief of the New York Botanical Gardens, one of the leading botanists of America. Among those who love the great fields and woodlands and flowers, his name, sir, is a household word. And in the flower garden of his character I can assure you—for I have long known him—he is as sweet as the flowers about which he works.

Hon. Joseph Buffington

Judge of the Third Circuit Court of the United States.

Doctor of Laws.

Presented by Hon. John D. Shafer.

Mr. Chancellor, the judicial hierarchy of the United States—if we may use the term without putting too much stress on its etymological implications—is represented in its highest rank in this community by one who is well fitted to represent it in its highest rank in the nation. In addition to being ajudge —there are some in these latter days perhaps who might say

in spite of it—he is a public spirited citizen and a benefactor of humanity. Combining the heart of a child, the vivacity of a boy, and the energy of youth with the dignity and learning of a jurist, he is an advocate of every good cause, a leader in many a good work, and an earnest promoter of the cause of education, of charity and of good government. I have the honor of presenting the Honorable Joseph Buffington, Judge of the Circuit Court of the United States, for the degree of Doctor of Laws, and I think it will not be improper to add that he will not be the first of the family to receive a degree from this University.

Norman McLean Duncan

Professor and Author.

Doctor of Letters.

Presented by Dr. W. J. Holland.

Mr. Chancellor, permit me to present for the degree of Doctor of Letters, Norman McLean Duncan, formerly Professor of Rhetoric in Washington and Jefferson College, well known everywhere as a journalist and an author who breathes the air of the salt seas. Strangely enough, he is now making his home in Kansas, which as we all know some time ago went dry; though as a palaeontologist I can inform you that we are able to resurrect a great many marine fossils in Kansas. There is no reference to Dr. Duncan in that. He is a live man.

Robert Kennedy Duncan

Director, Department of Industrial Chemical Research,

University of Pittsburgh.

Doctor of Science.

Presented by Dr. W. J. Holland.

And now, Mr. Chancellor, I have the honor of presenting the brother of the gentleman who has just taken his seat, Professor Robert Kennedy Duncan, who is Director in our own University of the Department of Industrial Chemical Research, and represents a new movement in university life which is crystallizing most successfully under his able guidance in this great center of chemical industry. I never met him until this morning, but I have read his book on The New Knowledge. I

have read charming articles from his pen in various literary journals. And I assure you it is a pleasant thing on this occasion to have welcomed two sons that came out from under the same parental roof and both of whom have done credit to those whose honored name they bear.

James Ewing

Professor of Pathology, Cornell University, Medical College.

Doctor of Science.

Presented by Hon. John D. Shafer.

Among those who come to us today from all parts of this land who have done or are doing a large share of the world's work and whom the University desires to honor, it is pleasant to find some who have gone out from our own city. The son of one who for many years was a principal figure in the judicial life of this city and whose memory is yet held in reverence by the legal profession, returns to us today from his activities in a different but equally important position, in which he has reached the front rank. I have the honor and the pleasure, Mr. Chancellor, to present for the degree of Doctor of Science, Dr. James Ewing, of the city of New York, Professor of Pathology in Cornell University, a deserved honor to his achievements in the science of medicine but so much the more pleasant because we deem him one of ourselves.

William Nimick Frew

President of the Board of Trustees, Carnegie Institute of Pittsburgh.

Doctor of Laws.

Presented by Dr. W. J. Holland.

Mr. Chancellor, it is with peculiar pleasure that I present to you for the honorary degree of Doctor of Laws, our mutual friend, Mr. William Nimick Frew, President of the Board of Trustees of the Carnegie Institute, a man who with unselfish devotion has for years served this community as the head of the governing board of that magnificent foundation established for the advancement of literature, science and art by Pittsburgh's pioneer giver whose benefactions have enriched the world. Mr. Frew is also a trustee of the Carnegie Institution

at Washington, of the Carnegie Hero Fund Commission, and of Mr. Carnegie's latest and greatest foundation, a graduate of Yale, a member of the legal profession. He is abundantly qualified to receive the degree which we propose to confer upon him in this institution, of which his father was one of the early benefactors and in the Board of Trustees of which William Nimick, whose name he bears, served for twenty or twenty-five years.

Milton Jay Greenman

Director, Wistar Institute of Anatomy, Philadelphia, Pennsylvania.

Doctor of Science.

Presented by Dr. W. J. Holland.

Mr. Chancellor, it gives me great pleasure to present for the degree of Doctor of Science, Dr. Milton Jay Greenman, the distinguished Director of the Wistar Institute of Anatomy in Philadelphia, who is known everywhere as one of the most able exponents of that science which gives us a knowledge of our *corpora vilia,* and in the magnificent institution in which he serves he is rendering a great service by initiating the highest type of research work.

Leland Ossian Howard

Chief of the United States Bureau of Entomology and Permanent Secretary of the American Association for the Advancement of Science.

Doctor of Laws.

Presented by Dr. W. J. Holland.

I have the honor of presenting for the degree of Doctor of Laws, Dr. Leland Ossian Howard, one of the most distinguished entomologists of modern times. Everybody who knows him loves him. For years he has been the Permanent Secretary of the American Association for the Advancement of Science. He is a graduate and a trustee of Cornell and has had honors showered thickly upon him. But no honor that he bears is greater than that of standing in the forefront as one of the leading officers in the army of agriculture in this country. What he does not know about the boll weevil, army worms, gypsy moths and the San Jose scale is not worth telling.

David Brown Oliver

President, Board of Public Education, Pittsburgh, Pennsylvania.

Doctor of Laws.

Presented by Dr. W. J. Holland.

Mr. Chancellor, I have the honor of presenting for the degree of Doctor of Laws, Mr. David Brown Oliver, a man who has devoted his best energies during the greater part of his life to the cause of elementary education and the common schools of this city and this state. He is a member of the State Board of Education and President of the Pittsburgh Board of Education. The honor which we confer is most appropriately bestowed upon him in recognition of his long and faithful service.

William Peterson

Vice-Chancellor and Principal, McGill University, Montreal, Canada.

Doctor of Laws.

Presented by Dr. John A. Brashaer.

Mr. Chancellor, I have the honor, an honor which I can not think that I deserve, of presenting to you for the degree of Doctor of Laws, Dr. William Peterson, who has done more perhaps for Canadian education, or education in Canada—because I do not think it is all Canadian education—than any other man that has ever been connected with the educational institutions of Canada. Before that, however, he was Chancellor, as we call it, Principal, as they call it, of Dundee University, that I had the pleasure of visiting when you sent me out to represent this University at St. Andrews. Dr. Peterson was the Principal there from 1882, up until 1895, when he came over to McGill University, which he organized in a way that a university should be organized to do its best work. He has been interested in many great institutions in their formation, and particularly that of McConnell College, which is doing such grand work for the agricultural interests of Canada. I can not say too much of Dr. Peterson. He has been honored by so many institutions in this country and abroad that I can hardly find a place where he has not been honored, and I think we are wholly honored in conferring the degree of Doctor of Laws upon Dr. Peterson.

David Thompson Watson

Attorney-at-Law, Pittsburgh—Counsel of the United States before the Alaskan Boundary Commission, 1903.

Doctor of Laws.

Presented by Dr. W. J. Holland.

Some years ago I had the pleasure of dining with the Lord Chief Justice of England, Lord Alverstone. In the course of a pleasant conversation which I had with him he took occasion to say that at the time he presided over the Alaskan Boundary Commission he had been led to conceive the very highest regard for the professional learning and legal acumen of one of my fellow-townsmen, David Thompson Watson. We all know that his Lordship gave judgment practically as prayed for on behalf of the people of this country by this distinguished fellow-townsman of ours. And, sir, it is a very great pleasure to present him on this occasion to the Chancellor of the University of his own city for a degree which he richly deserves and to which we can not add too much of respect and honor and confidence.

Rt. Rev. Cortlandt Whitehead

Bishop of the Protestant Episcopal Diocese of Pittsburgh.

Doctor of Laws.

Presented by Dr. W. J. Holland.

And now, Mr. Chancellor, last but by no means least of those whom it has been our honor to present to you for honorary degrees on this pleasant occasion, it is my delightful duty to present to you the name of a brother beloved who recently celebrated the thirtieth anniversary of his induction into the Protestant Episcopate of Pittsburgh, who has been longest in continuous service on the Board of Trustees of the University and is its honored Vice President. A chivalrous gentleman, a good citizen, a devoted servant of his Divine Master, Bishop Cortlandt Whitehead. We present him for the degree of Doctor of Laws.

Following this session, the guests of the University were entertained at luncheon at the Hotel Schenley.

WEDNESDAY, FEBRUARY 28th.

2.00 P. M.—EXERCISES IN COMMEMORATION OF THE GRANTING OF THE FIRST CHARTER.

The afternoon session on Wednesday was presided over by Chancellor McCormick. The invocation was offered by Rev. Matthew B. Riddle, D. D., LL. D., Professor of New Testament Criticism in the Western Theological Seminary and the son of Dr. David H. Riddle, Chancellor of the University from 1849 to 1855.

Following the invocation Chancellor McCormick spoke briefly, as follows:

I regret, as all of us do, that the formality of the afternoon has been broken up, owing to the inclemency of the weather conditions. We have not been able to present as fine an appearance as we did in the morning procession. But all of it passes over into greater comfort and the better opportunity to hear what shall be spoken. I trust, therefore, that the compensation will equal the loss that we have sustained.

I wish also to apologize for the neglect to call upon Dr. Hollis and Dr. Peterson, both of whom we expected to say a few words of response, Dr. Peterson for Canada, Dr. Hollis for the American institutions of learning in existence before 1787. The hour became so late that I took the privilege and was conceded the privilege of omitting that part. But I want you to know that these gentlemen were to speak this morning.

We are now ready for the program. I introduce Dr. William Jacob Holland, Director of the Carnegie Museum, Chancellor of the University at the time it became a university in fact, a man who has not only given years of his life to the service of the University but who is himself a constituent part of it. You would have to tear Dr. Holland apart before you could tear the University of Pittsburgh out of him. I take great pleasure in presenting Dr. Holland, who will give the historical address of this program.

Dr. Holland spoke as follows:

Mr. Chancellor, Fathers and Brethren, Ladies and Gentlemen:

The occasion which we celebrate today leads our minds back to the thought of the world as it was a hundred and twenty-five years ago. You will therefore pardon me, if, before attempting a rapid review of the history of the University

which I have been asked to give, I attempt in a few words to carry you back in imagination to the time when our story begins. One hundred and twenty-five years is for the historian a mere span, but the one hundred and twenty-five years of which we speak included "The Wonderful Century"—the Nineteenth.

One hundred and twenty-five years ago the science of chemistry was in its infancy. The discovery of hydrogen antedates the beginning of our story by but twenty-one years, that of nitrogen by but fifteen, and that of oxygen by but thirteen. Many of the important elements and their compounds were unknown, and a thousand substances in daily use in the arts of today were undiscovered and unnamed.

The science of physics was likewise in its infancy, more particularly in the application of its principles to the mechanical arts. There were no railways, no steamships, no telegraphs in the world. The most advanced piece of electrical mechanism in existence was the Leyden Jar, invented by Cuneus in 1745. The most complicated piece of machinery, which human ingenuity up to that time had evolved, was a watch. All the arts such as spinning, weaving, sewing, printing, were laboriously carried on by hand. The only iron produced was in small charcoal furnaces with an output of a few tons a week. Even fifty years later the art of iron-making was in its infancy. My father-in-law, who was the dean among the iron-masters of Pittsburgh at the time of his death in 1881, used to relate that when he was a young man Dr. Peter Schoenberger, whose furnaces he managed in the Juniata Valley, when on a visit of inspection, asked him what a certain furnace was doing. "I am getting thirty-five tons a week", was his answer. "Heavens! John", was the reply, "you will ruin the furnace, it was only built to cast thirty tons a week". Today a furnace which does not turn out five or six hundred tons a *day* is regarded as behind the times. The only steel was blister steel, used in making cutlery and tools, and selling for twenty times the price demanded for a similar article produced today. The word petroleum had not been coined, for the thing it represents was unknown. The only gas utilized was common air. The only India-rubber known consisted of a few pieces preserved as curiosities in museums.

Astronomy had not advanced far beyond the opera-glass stage, so far as seeing was concerned. The spectroscope had not been invented. No one dreamed of such a thing as pho-

tography and its applications in astronomy. Geology and its sister science, paleontology, were in their veriest infancy. The biological sciences, botany and zoology, were little further advanced than they had been in the days of Aristotle, though Linnæus, Jussieu, and Lamarck had already laid foundations, upon which the men of the Nineteenth Century were to build a magnificent superstructure.

One hundred and twenty-five years ago the world, viewed from the standpoint of the financier and economist, was a very different world from today. All the store of precious metals in the world a hundred and twenty-five years ago, the accumulation of sixty centuries, did not equal the output of the last decade. Coin was scarce and dear. Today coin is cheap, and every year growing cheaper, because more abundant, and that is one of the reasons why eggs are high. There were no Rothschilds, no Carnegies, no Rockefellers in the world. The only millionaires were those who had reached that position by kingcraft, and not by mercantile and manufacturing pursuits. The richest man in North America was a Virginian farmer by the name of George Washington, who had surrendered the command of the Continental Army to retire to growing wheat and mutton, and who owned a lot of wild land about Pittsburgh, the site of which he had examined in 1753, and to which he paid his last visit in 1770. This rich Virginian was destined two years after our story begins to become the first President of the United States.

One hundred and twenty-five years ago the world, viewed from the standpoint of the statesman, was a very different world from that in which we live. The dominant power in Central Europe was Austria; the greatest world-power was Spain, England having just lost her largest holdings in the new world, and having not as yet attained her present vast possessions in Asia and Africa. China and Japan were little more than names suggesting mystery to the men of the West. Australia and New Zealand had not yet been colonized by a single white man. Africa, except along the Mediterranean and at the Cape, was as yet *terra incognita*. Napoleon, the great iconoclast and reorganizer, was an unknown youth. Germany was a jumble of petty States. Italy was hopelessly divided into petty kingdoms and principalities. Little Portugal, owning Brazil and other large territories across seas, was a power held in great respect. And Turkey was at the zenith of her political greatness, a power dreaded by all of Europe.

One hundred and twenty-five years ago there were but thirteen stars upon the flag of the United States. The thirteen states composed a loose confederacy, confronted at every moment with the danger of disruption. The Constitution under which we have lived for over a century had not yet been written. The territory of the United States consisted of the territory of the thirteen colonies and the Northwest Territory, steps being taken by Virginia to cede the latter to the confederacy. Florida, Louisiana, and all the land stretching from the Mississippi to the Pacific belonged to Spain. The maps of that day, should you care to consult them, will show you that what we know as the Middle West and the region of the Rocky Mountain States was as thoroughly unexplored at that time as was Central Africa fifty years ago.

One hundred and twenty-five years ago Chicago was a bog; Denver was a mesa over which herds of buffaloes strayed in peace, except when occasionally chased by Indians; Kansas City was a bluff on which turkeys roosted. One hundred and twenty-five years ago forty log cabins composed all there was of St. Louis; Louisville had not quite so many, Cincinnati even less and Pittsburgh was a squalid frontier settlement in which a few trappers, traders, and former officers of the continental army were settled. Arthur Lee's picture of the spot, familiar to all Pittsburghers by frequent quotation, must not, though threadbare, fail to be cited. He visited the place in 1783 and says, "It is inhabited almost entirely by Scots and Irish, who live in paltry log houses and are as dirty as in the north of Ireland, or even Scotland. There are in the town four attorneys, two doctors, and not a priest of any persuasion, nor church, nor chapel, so that they are likely to be damned without benefit of clergy".

In 1786 the publication of the "Pittsburgh Gazette", a weekly newspaper, had been begun, and one of the four attorneys mentioned by Lee, whose name was Hugh Henry Brackenridge, began to contribute a series of spirited articles to its columns, advocating among other things the establishment in the settlement of a church and of a school. Hugh Henry Brackenridge was a man of power. He had been graduated at Princeton in 1771, in the same class with James Madison, who later became the fourth President of the United States, and Philip Freneau "The Poet of the Revolution", with whom, before coming to Pittsburgh he had collaborated in literary efforts.

He became in later years a Judge of the Supreme Court of Pennsylvania, and was the author of a political novel entitled "Modern Chivalry", a book little known today, but which a recent critic has declared to be in some respects worthy of comparison with the immortal work of Cervantes. But there is not time to speak of the political or literary career of this remarkable man.

In the fall of 1786 Brackenridge went to Philadelphia to take his seat as a member of the General Assembly of the Commonwealth, and while there secured the enactment of a law incorporating the Pittsburgh Academy as a seat of learning. The act was passed exactly one hundred and twenty-five years ago today. Brackenridge also obtained a grant from the heirs of William Penn of a piece of land at the corner of Third Avenue and Cherry Alley, as a site for the school, and a grant of five thousand acres of wild land in the northwestern part of the State to be used as an endowment. He tried to get a grant of the land known as "The Reserve Tract opposite Pittsburgh", the site of the former city of Allegheny, but was defeated. Had he succeeded, perhaps our story would have been different.

The preamble to the act of incorporation states that "The education of youth ought to be a primary object with every government", and gives as a reason for the passage of the act the fact that "Any School or College yet established is greatly distant from the country west of the Allegheny Mountains", and that "The town of Pittsburgh is most central to that settlement, and accommodations for students can be most conveniently obtained in that town". The act also provides that "persons of every denomination of Christians shall be capable of being elected Trustees".

On this anniversary occasion it may be well to recall the names of those who in that first charter are designated as the incorporators. Their names were inserted in the instrument by Brackenridge, as he himself tells us, because of their eminence and fitness for such a trust. They were the Rev. Samuel Barr, who became the pastor of the First Church of Pittsburgh; the Rev. James Finley, a younger brother of President Finley of Princeton; the Rev. James Powers, the Rev. John McMillan, and the Rev. Joseph Smith, all graduates of Princeton and pioneers in the Christian ministry and in the cause of education, through whose labors subsequently the Academy at Washington and the Academy at Canonsburg came into being, both perpetuated today in Washington and Jefferson College.

The remaining clerical member of the Board was the Rev. Matthew Henderson, who had been educated in Scotland, and whose memory is fragrant in the annals of the United Presbyterian Church. Associated with these clerical gentlemen were Colonels Pressley Neville, William Butler, and Stephen Bayard, Revolutionary officers of distinction. James Ross follows in the list. He subsequently became one of the first two United States Senators from Pennsylvania, serving during the administrations of Washington, Adams, and Jefferson. David Bradford, the twelfth on the list, was a man of influence and ability, who subsequently fled the region, owing to the part he took in the popular uprising against the Government of the United States, familiarly known as the "Whiskey Insurrection". He found a refuge in Louisiana. His granddaughter was the wife of Jefferson Davis, the President of the Confederate States of America. Robert Galbraith, George Thompson, George Wallace, Edward Cook, John Moore, William Todd, and Alexander Fowler were prominent men of whose achievements time forbids that I should speak. Dr. Nathaniel Bedford and Dr. Thomas Parker were in all probability the two physicians to whom, as we have seen, Arthur Lee made reference in 1783.

The first meeting of the Trustees was held on March the 18th, 1788, at which time an organization was effected. The first Secretary of the Board was Robert Galbraith. The first principal chosen was George Welch, *nominis umbra!* He was succeeded at a later date by James Mountain and the Rev. John Taylor, who were in joint control of the school in the year 1800. The former had been the first principal of the Canonsburg Academy out of which sprang Jefferson College, and subsequently became an eminent lawyer; the latter was the first pastor of the first Protestant Episcopal Church organized in Pittsburgh, known today as Trinity Church. (Mr. Chancellor, let me interrupt my discourse for a moment. Seated beside me is a great-granddaughter of James Mountain, Miss Julia Morgan Harding, whom I desire to present to you, a lady conspicuous in this community for her intelligence and her good works. It is my honor on her behalf to present to the Trustees of this University here and now, the portrait of the first principal of the Canonsburg Academy, and the Second Principal of our own Pittsburgh Academy, a precious heirloom, which in loyalty to the University of her city she confides to our keeping.) (Applause.) After the resignation of James Mountain

and "Father" Taylor, as he was lovingly called, the principalship devolved upon the Rev. Robert Steele, who was the pastor of the First Church of Pittsburgh. He in turn was succeeded by Benjamin B. Hopkins, who from 1800 to 1803 had been a tutor at Princeton. In 1807 the principalship was assumed by Robert Patterson, who had been one of the first students in the Canonsburg Academy, which he entered in 1791, and who was subsequently graduated from the University of Pennsylvania in 1795, where, after graduation, he continued to remain, acting as a tutor until 1800. He was a man noted for his learning, and prominent on account of the graces of a noble Christian character. His successor in the year 1809, was the Rev. Joseph Stockton, who came on his father's side of an historic race, and through his mother inherited the blood of Francis Makemie, one of the pioneer Presbyterian clergymen of this continent. He was the author of the "Western Calculator" and the "Western Spelling Book", the first school-books published west of the Allegheny Mountains. He continued in the principalship until the year 1819, when the Academy was reincorporated as the Western University of Pennsylvania.

There is little time on an occasion like the present to dwell upon the life of the school. It suffices to say that the course of instruction was, in view of the requirements of the time, excellent, and that a number of men who afterwards rose to distinction in the Christian ministry, at the bar, on the bench, and in the political life of the state and nation were pupils of the Pittsburgh Academy. Henry M. Brackenridge, the son of Hugh Henry Brackenridge, in his book entitled "Recollections of the West", speaking of his school-boy days when he was a student of the Academy, says, "It would be a fruitful theme to speak of my school-fellows, but it would occupy too much space for the plan of these memoirs. I will, however, name Morgan Neville, William Robinson, William O'Hara, and Charles Wilkins of the first class. The first of these was the first of the first. The stories of 'The Last of the Boatmen', 'Chevalier Dubac', etc., are of themselves sufficient to stamp him as a man of genius, but his accomplishments in everything which can form a perfect gentleman leave him no superior in this country and few equals. In the second class I may name James O'Hara, Fayette Neville, William Tannehill, and his cousin James C. Wilkins. Mr. Tannehill resides at Nashville, and is one of the best writers in our country". The Hon. Wilson McCandless, who was a student in the old Academy,

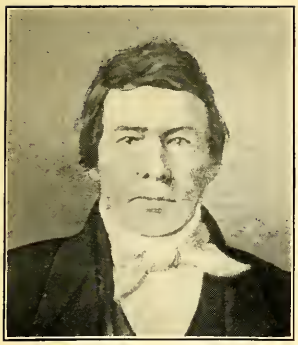
in an address made on December the 19th, 1856, before the University, said, "The nucleus of this institution was the old Pittsburgh Academy, whence emanated many men who have illustrated the genius of our Government and people". The good Judge himself on one occasion narrowly escaped being nominated for the Presidency of the United States by the Democratic party instead of Franklin Pierce. Had he received the nomination he would certainly have been elected, as the country went Democratic that year.

Such was the prosperity of the Academy at the close of the second decade of the last century, and such the manifest necessity for the establishment in this community of an institution of higher learning, that it was resolved to seek the re-incorporation of the Academy as "The Western University of Pennsylvania", following the precedent established at the other end of the State by which the Philadelphia Academy had been some time before re-incorporated as the University of Pennsylvania. This was done by an act of the Legislature, approved on the 18th day of February, in the year 1819.

According to the terms of this act it was provided among other things that the property of the Pittsburgh Academy should be in its entirety transferred to the University, that persons of every religious denomination should be capable of being elected Trustees, and that no religious tests should be applied in the case of members of the faculty or pupils; and further, that forty acres being a portion of what are now the parks located in the northside of Pittsburgh, should be set aside as a campus for the University. This latter provision was unfortunately defeated, as had been the effort made in 1787 by Hugh Henry Brackenridge to have the site of Allegheny devoted to the use of the Academy.

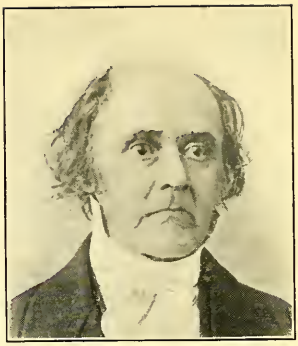
The persons named in this second act of incorporation were as eminent as those who had been the original body of incorporators in 1787. The name of Senator Ross heads the list. Dr. George Stevenson, who became the first President of the Board of Trustees, was an original member of the Society of the Cincinnati. The Rev. Francis Herron, then a young man, was for fifty years the honored pastor of the First Church of Pittsburgh. His grandson, the Hon. George Shiras, lately one of the Justices of the Supreme Court of the United States, we regret is unable to be with us today. John Scull, the founder of the *Pittsburgh Gazette,* was prominent in social and political life. John M. Snowden, the editor of the *Pittsburgh*

Mercury, later became a judge. William Wilkins was distinguished above most men of the region. He became a United States Senator, and represented our country at the court of St. Petersburg. Henry Baldwin was a Justice of the Supreme Court of the United States. Walter Forward was an eminent lawyer, who later became Secretary of the Treasury of the United States. George Poe, Jr., was a near relative of the famous poet of the same name. Samuel Roberts was a jurist whose opinions are still held in respect. James Allison was a member of Congress. Joseph Stockton, Robert Bruce, and John Black were men of mark, to the first of whom we have already had an introduction. But particular mention should be made of the latter two, for during twenty years they were the most prominent factors in the life and development of the school. Robert Bruce was a graduate in arts and theology of the University of Edinburgh. He was a lineal descendant of the bravest of Scottish kings. He was the pastor for many years of what is now known as the First United Presbyterian Church of Pittsburgh, a polished gentleman, a learned student of the classics, and gifted to a remarkable degree with the power of inspiring and encouraging young men. John Black was a graduate in arts and theology of the University of Glasgow. He came of a sturdy stock of Scottish yeomanry. Before coming to Pittsburgh he had resided in Philadelphia, where he had taught for a time, being associated with his brother-in-law, Dr. Samuel Wylie, D.D., who was eminent as an educator, becoming at a later date a member of the faculty and an officer of the University of Pennsylvania. I have in my possession an entertaining account of the manner in which the pupils in that Philadelphia school in which John Black taught attempted to test the material of which he was made. The ring-leader was a young fellow by the name of Stephen Decatur, before whose guns at a later date the Barbary powers were made to tremble, and who effectually put a stop to their piratical inroads upon the commerce of the world. Young Decatur, familiarly accosting Black, who was not many years his senior, as "Paddy", suddenly found himself lying on the floor with "Paddy's" foot upon his prostrate body, while the irate young preceptor challenged the entire class to "come on". He won a complete victory and became enshrined in the hearts of his pupils as being made of "the right kind of stuff". For years he was the Professor of Greek in the University here, and among his descendants are many of the best people of this



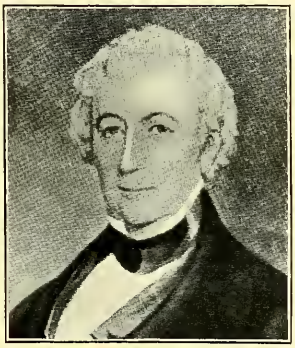
JOHN BLACK

rofessor of Ancient Languages
and Classical Literature



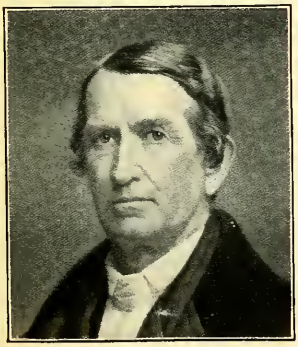
ELISHA P. SWIFT

Professor of Mental and Moral
Philosophy



ROBERT BRUCE

Chancellor
1819-1843



JOSEPH McELROY

Professor of Rhetoric and
Belles-Lettres

CHARLES B. MAGUIRE

Professor of Modern Languages
and Grammar.

FIRST FACULTY OF THE UNIVERSITY

community, some of whom the world has heard from because of their achievements.

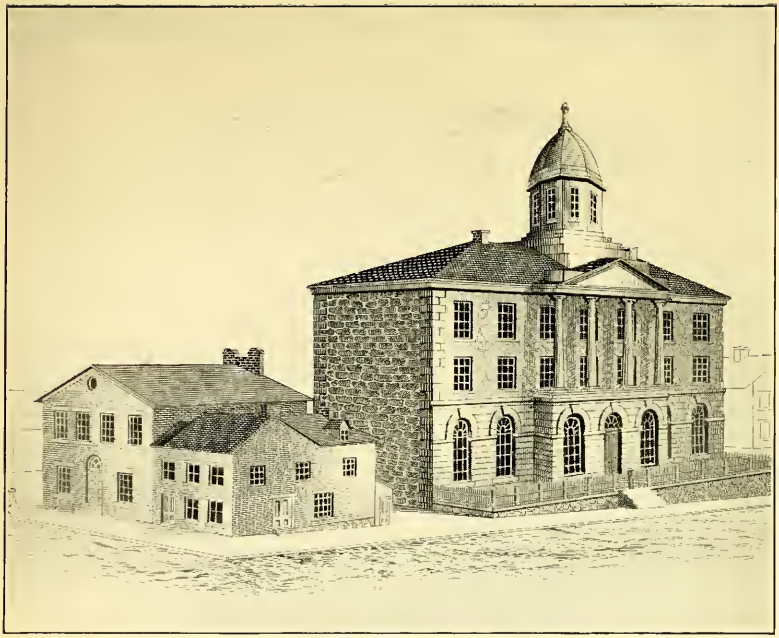
The formal inauguration of the University by the beginning of collegiate classes did not take place until the year 1822. In the interim the work of the Academy was carried forward by the Rev. Robert Bruce and the Rev. John Black. The public inauguration of the work of the University took place on the 10th day of May in the year 1822, the installation of the faculty occurring in the audience room of the First Church. It was an occasion of civic rejoicing, attended with more than ordinary pomp and ceremonial. We have an account from an eyewitness, who tells us that "There was a procession with music, banners, and badges, in which the city fathers, the judiciary, gentlemen of different learned professions, the Trustees, and students, marched to the old First Presbyterian Church, where the venerable and accomplished Dr. George Stevenson, the President of the Board, delivered the inaugural address to the faculty, which was happily responded to in the solid and massive eloquence of the Rev. Dr. Bruce".

The faculty present on that occasion were, Dr. Bruce and Dr. Black (of whom we have already spoken); the Rev. Charles B. Maguire, who had been chosen as professor of modern languages. He was of Irish extraction, had been educated in Belgium, had taught for many years in Rome, and had served as a parish priest in Prague. He was the founder of St. Paul's Church, now the Cathedral Church of the Roman Catholic diocese of Pittsburgh. Rev. Elisha P. Swift, the professor of mental and moral philosophy, was a Bachelor of Arts of Williams College, and had taken his Master's degree at Yale. He was a lineal descendant of Eliot, the celebrated "Apostle of the Indians", and was at that time pastor of the Second Presbyterian Church of Pittsburgh. In a letter from one who knew him well, which I hold among my treasures, he is denominated as "a great man and a great saint". To tell of all that he did during his noble life would take more time than I can now command. The Rev. Joseph McElroy, the "professor of rhetoric and belles-lettres", as he was styled, was the pastor of the Associated Reformed Church in the town. He had been graduated in 1812 at Jefferson College and studied theology under the celebrated Dr. John M. Mason. He had been in Pittsburgh in active service since 1814. Subsequently he was the pastor of the Scotch Presbyterian Church in New York City for fifty years.

These five men constituted the first faculty in the proper sense of the term, but a preparatory department, intended to continue the elementary work of the Academy, was maintained under the principalship of Valentine B. McGahan, whose leather strap, when I came to Pittsburgh forty years ago, was still humorously referred to by some of the older citizens, and who had associated with him as an assistant a young man by the name of Hopkins, who had undertaken at first to manage an iron furnace belonging to a Mr. Glaser. When this property was sold by its owner, he began to study law, and at the same time to teach in association with Mr. McGahan. Admitted to the bar, he practiced law in the circuit composed of Allegheny, Butler, and Beaver Counties. He afterwards forsook the law, entered the Episcopalian ministry, and preached in the old "Round Church", the first Episcopalian church edifice erected in Pittsburgh, and finally became the Episcopal bishop of Vermont, creating a sensation at one time by writing a book in defence of slavery upon Biblical grounds.

With the granting of twenty-two thousand dollars by the Legislature of Pennsylvania, the subscriptions of public-spirited citizens, and the proceeds of the sale of certain lands in the northwestern part of the State, a building was erected on the old site at the corner of Third Avenue and Cherry Alley, which was at the time of its completion the finest edifice in the city of Pittsburgh, according to the accounts which have come down to us. In that day of small things the building, so far as we know through pictures which we possess, was indeed a highly creditable structure, and it furnished at the time better accommodations than were enjoyed by many kindred institutions of learning in other parts of the country.

The work of the institution prospered. Many young men who later attained distinction were graduated in the years extending from 1822 to 1849. Of the alumni of that period I find that one became a United States Senator, four became members of Congress, three became Chief Justices of States, two became Governors of States, one represented the United States at a foreign court, ten became Judges of the Courts of the United States or Commonwealths, eighteen served as Trustees of Colleges, five were college Presidents, and thirteen were professors; three were Moderators of the General Assemblies of the churches to which they belonged, five became editors, and two authors of more than local reputation; and of almost every one who lived long enough to test the worth of the train-



FIRST BUILDING OF THE UNIVERSITY
1825-1845
Third Avenue and Cherry Alley

THE UNIVERSITY BUILDING
1854-1882
Ross and Diamond Streets

ing he received it can be said that he was an eminently useful member of society. But four of the alumni of this period of our history survive. They are Dr. Boyle Kerr of the class of 1848, Col. Algernon Sidney Mountain Morgan of Pittsburgh, the Rev. Dr. Joseph Horner of Pittsburgh, and Mr. Andrew Watson Pentland, of Washington, D. C., long in the service of the Government, the latter three being graduates of the class of 1849. Of the teachers of that period only one survives today, Mr. Tibbetts, who was a member of the faculty in 1847, and I have the honor of grasping him by the hand, and introducing him to you. (The whole audience rose instinctively to their feet, and with loud applause greeted the venerable white-haired man, still erect and stately in appearance.)

The study of the records shows that the faculty during these years included a number of men whom it would have been an honor to any institution to have claimed. Of the first professors I have already spoken. The principalship of the institution was held continuously by Dr. Bruce from 1819 until 1835. From 1835 until 1836 Rev. Gilbert Morgan served as principal. Dr. Bruce then recurred to the principalship, and held it until 1843. From 1843 to 1849 the Rev. Heman Dyer, D. D., was the principal.

In 1845, on the 10th day of April, the city of Pittsburgh was visited by a terrible disaster. Almost the entire business and residential portion of the city was consumed by fire, and among the buildings destroyed were the building of the University and the house of the principal adjoining it. Unfortunately the records, which had been kept from 1787 to 1845, perished in the flames. In consequence the work of your historian has been made vastly laborious. Steps were immediately taken to rebuild upon a new site situated upon Duquesne Way. But in 1849, when the second building had scarcely been completed, it likewise fell prey to fire, and thereafter, in pursuance of a policy which we now know to have been mistaken and regrettable, the work of instruction was temporarily abandoned, and the moneys of the University were invested and allowed to accumulate.

Among those who failed to graduate because of the temporary suspension of the University were a number of men who rank high in the annals of American citizenship. Among them I find the names our honored fellow-townsman Professor Matthew B. Riddle, today the only survivor of the British and American Committees for the Revision of the Translation of

the New Testament; of General A. C. McClurg, in his time the leading publisher in Chicago; and of Washington Roebling, to whom fell the task of completing the beautiful structure spanning the East River between New York and Brooklyn, of which his distinguished father was the designer.

During the period from 1849 until steps were taken in 1855 to revive the work of the institution, the Board of Trustees continued to hold meetings, and the Rev. David H. Riddle, the pastor of the Third Presbyterian Church, acted as principal in order to attend to any matters relating to the body of alumni which might require attention. In 1855 a site at the corner of Ross and Diamond Streets was secured, and steps were taken to erect a new building, which still stands today. Rev. Dr. John F. McLaren, D. D., was chosen as the principal. It was in the dark and troublesome days of the panic of 1857 that the work of instruction was commenced. A large body of students was gathered. Dr. McLaren continued to serve for three years, and was then succeeded by Dr. George Woods, who brought to his task learning, self-denying enthusiasm, and the power to enlist men. A new era by that time had begun. The great Civil War convulsed the land. General Rodman, a son-in-law of Professor John Black, Nicholas Wade, a student in the class of 1849, and others, were casting the cannon at the Fort Pitt Foundry which were to thunder forth the notes of victory down the river at Vicksburg, at Fort Jackson, at Mobile, and in the trenches at Petersburg. War is an affair of blood and steel, and Pittsburgh makes steel. The war with all its disasters brought to this town, as to other cities of the land, a tremendous increase in the development of energy. It marked the beginning of an industrial as well as social and political revolution. Huge fortunes were made, and the foundations for other huger fortunes began to be laid. The city moved forward, and some of those who had made fortunes began to think of the stewardship which through the access of wealth was laid upon them. Among these were such men as Henry Lloyd, William Frew, and that princely man, William Thaw.

There is not time to tell you of all that was done. The period covered by the administration of Chancellor Woods was a period in which the school advanced with rapid strides in the acquisition of material resources. Mr. Thaw came forward with a proposition to give one hundred thousand dollars toward the endowment of the institution, provided a like amount should be contributed by other citizens. The sum of

two hundred thousand dollars was quickly raised. It would be interesting, had I the time, to call the roll of honor of those who contributed. Some gave in large, some in smaller amounts. I find in the list the name of our honored Trustee, Mr. Andrew Carnegie, at that time a young man just entering upon his successful business career, who subscribed five thousand dollars, which, in a note recently received from him he says was his "first considerable contribution to the cause of education". It was at that time a generous gift from him. The whole world has been since enriched by his benefactions.

In 1858 the appearance in the skies of Donati's comet, the glories of which linger in the memories of those of us who were living then, excited wonder everywhere, and nowhere more than in the city of Pittsburgh. The result of the interest awakened by this phenomenon and a series of lectures on astronomy given in Pittsburgh by General O. M. Mitchell was the formation of a society having as its object the creation of an observatory, to be known as "The Allegheny Observatory". In 1865, by an act of legislature all the property of the Observatory was transferred to the University. Of the achievements of Professor Samuel P. Langley, who presently became the Director, and of his brilliant successors, there is not time to speak. Suffice it to say that in addition to the remarkable discoveries made by Langley in the domain of solar physics, and his remarkable inventions for measuring stellar heat, he began here the experiments in aerodynamics, which, continued by him at a later date, after he had become the Secretary of the Smithsonian Institution, have made it possible to navigate the air by machines heavier than air. Mr. William Thaw gave the money for the work. Only last year a Pittsburgh boy flew across the continent in a machine embodying the principles of flight ascertained by our former honored colleague.

During the term of office of Dr. Woods various legislative enactments were passed in regard to the University. Among others the title of the presiding officer was changed from that of "Principal" to that of "Chancellor".

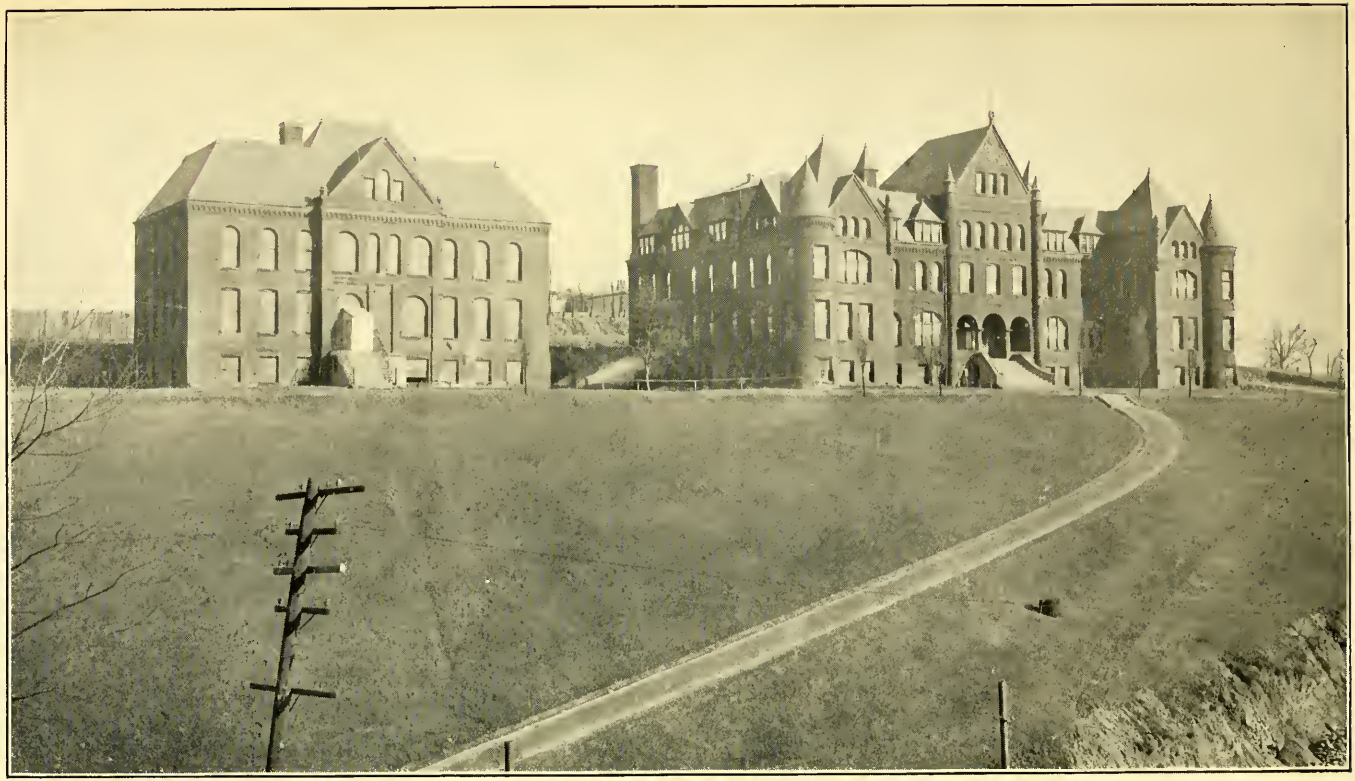
In 1881 the Rev. Dr. Henry M. McCracken came to the Chancellorship, Prof. Milton B. Goff having in the interval between 1880 until the accession of Dr. McCracken, served as acting Chancellor. During the administration of Dr. McCracken the property belonging to the University was purchased by the County of Allegheny to serve temporarily as a court-house while the new court-house, which replaced the for-

mer building which had been destroyed by fire, was being erected. The work of instruction was continued in quarters rented from the United Presbyterian and the Associated Reformed Presbyterian Theological Seminaries in Allegheny. Dr. McCracken in 1884 resigned in order to become the Chancellor of the New York University. He was succeeded by Chancellor Milton B. Goff, during whose administration new buildings for the College and the Engineering School were erected upon the land belonging to the Allegheny Observatory.

The buildings were not yet completed and the grounds were still in an unfinished condition when Dr. Goff unfortunately died as the result of an accident, and the present speaker in 1891 succeeded to the Chancellorship.

While the University up to the time of which I speak had the name which it bore, efforts to make it a University in fact as well as in name had not been persistently carried out. It is true that in the fourth decade of the last century an attempt had been made to establish a school of law, and the Hon. Walter H. Lowrie, who afterwards became one of the Judges of the Supreme Court of Pennsylvania, with several other members of the legal profession, gave instruction to students in law, a number of whom were graduated; but the destruction of the University in 1849, as I have narrated, brought this commendable beginning to an untimely end. Subsequently, during the chancellorship of Dr. Woods and of Dr. MacCracken, efforts to create a school of law had been made, but without success. The time, however, appeared to be ripe to establish a law school, and, thanks to the splendid efforts of the Hon. John D. Shafer and his associates, to whom too much praise cannot be given, the Law School of the University arose, and is recognized today as one of the best institutions of its kind in the country.

During the administration of Chancellor Goff it had been resolved to lay emphasis upon engineering courses, and under the leadership of Dean Carhart the Engineering School of the University had been begun, courses in civil and mechanical engineering being provided. To these was added a course in electrical engineering, and when the time came to choose a Professor I went to my good friend, Mr. George Westinghouse, for advice. He recommended a young man who was then teaching in Purdue University, and whose name was Reginald A. Fessenden. We elected him. It may interest you to know that the discoveries made by this very capable man in the fall of the



THE UNIVERSITY BUILDINGS—1890-1908
Perrysville Avenue, North Side

year 1899, while connected with the University, have resulted in such improvements in the methods of flashing wireless messages that Marconi has abandoned his own original methods in part and is now employing apparatus designed according to the principles enunciated by Fessenden. (Applause.)

In 1895 the Western Pennsylvania Medical College was absorbed by the University, becoming its Medical Department. The Pittsburgh College of Pharmacy became a part of the University shortly afterwards. A school of Dental Surgery was founded. The School of Mining Engineering was established by the State of Pennsylvania in 1897. Postgraduate courses in various branches were established. Under the able leadership of our honored friend Dr. John A. Brashear, inspired by our dear departed friend, Prof. James E. Keeler, the successor of Samuel P. Langley, the task of rehabilitating the Observatory on a new and better site was undertaken, and thanks to the generous assistance of the citizens of this city, that institution today is in a position to command the respect and admiration of the world as never before.

After having held the Chancellorship for ten years the present speaker resigned his position, and Dr. Brashear temporarily filled the vacancy from 1901 until the accession of the present Chancellor, Dr. Samuel Black McCormick. Gentlemen, it gives me profound pleasure on this occasion to testify, as one who understands the cares and difficulties of the office filled by the honored Chancellor of the University as few others can understand them, to the tireless energy, to the wise prudence, and to the splendid achievements which have marked thus far the brilliant administration of my successor. In 1908 the name of the University was changed from that of the Western University of Pennsylvania to that of the University of Pittsburgh. (I voted against the change.) But in spite of this change of name the institution stands today, as the Legislature of Pennsylvania intended that it should stand, as the exponent of University principles and methods in the western half of the Commonwealth, ministering to the needs of the three and a half millions of people living within reach of this busy metropolis at the headwaters of the Ohio, the most populous center on the continent with the exception of the district about New York.

During the administration of Chancellor McCormick great things have been done. A new campus has been acquired. On this a number of fine buildings have already been erected.

One of these is a splendid gift from one of our famous football players, who matriculated in my day. ("Three cheers for Joe Trees!" were given with a will by the students.) The College, the old central institution, has taken on new life, and though we are surrounded by the roar of machinery we are determined that the amenities of literature and the graces of good style shall not fail to be cultivated, and that our students shall at least learn to spell and write the English language correctly. New departments and new courses of study have been organized. The number of students has vastly increased. When I became the Chancellor in 1891 there were seventy-five students. When I resigned the Chancellorship there were over eight hundred. Today there are over two thousand. The Commonwealth of Pennsylvania and the city of Pittsburgh, the latter under the leadership of our good Mayor, have come forward to aid the institution. The people of the western half of the Commonwealth are beginning to understand that this school is their school, that it is the capstone of the great educational system, which, beginning with the elementary school on some broad avenue of the city, or in some humble frame building among the mountains, is the open door of learning, entering which the son of the poorest man may press his way onward and upward until he obtains through the University the right to exercise the highest callings which are open to men in the Commonwealth and in the land.

Mr. Chancellor, to press the history of one hundred and twenty-five years into an address of forty minutes is a trying task. At best what I have given you is a hasty sketch. My time is nearly up. But before taking my seat let me say that the most vital things in the world today are its institutions of learning. The Universities of Bologna, Oxford, Cambridge, Paris in the old world have weathered the political storms and the revolutions of centuries. Many of the institutions represented here today have lived under the British crown, under the early confederacy of the thirteen colonies, and under the Republic. They will continue to live and grow and prosper. Why? *Because they are the servants of the souls of men.* You cannot kill this institution here in our midst, which has weathered the gales of one hundred and twenty-five years. It will grow, it must grow. It is rooted deep in the affections of the men and the women of this Commonwealth. To give to it gifts which will enable it to perform its work to the greater welfare of mankind should be esteemed one of the highest duties and

greatest pleasures of those who are the stewards of wealth, and I trust the day is coming when all men in our midst will realize that to have lived and prospered, and then to have died without having done something to promote the well being of this, the oldest institution of learning on the continent west of the Allegheny Mountains, will be to have died disgraced.

Chancellor McCormick:

I had hoped that the daughter of Dr. Dyer, head of the University from 1843 to 1849, would be with us today, but she is in Europe. Dr. Riddle, whose father acted as head of the University from 1849 to 1855, is with us and was introduced this afternoon. Judge Hancock, present today, was a professor in 1859. The son of Dr. Woods, Chancellor from 1858 to 1880, will be present at the exercises this evening. I received the following note from Chancellor MacCracken, who expected to represent New York University.

University Heights, Feb. 26.

Dear Chancellor McCormick:

Thanks for your kind notes. Because of the assured abundant hospitality of the University of Pittsburgh, I especially fear to journey to the 125th Anniversary, when not in good traveling plight. I have been still hoping to feel equal to the undertaking, but the unfavorable weather prospects discourage me today.

I asked my alternate, Professor Hering, to take my place, but he reports that he cannot do so.

I shall refer to our Corporation which meets today the question of securing a representative at the Commemoration.

Not a little of my heart will be with you and with the University which I was serving this time thirty years ago, in its ancient home opposite the old Court House. May the great expanse of its material form be a symbol of the growth of its power for intellectual, social and spiritual good.

Faithfully yours,

(Signed) Henry Mitchell MacCracken.

I am glad to communicate this message to the audience this afternoon. We have now four addresses, representing Eastern and Western Pennsylvania, the further east and the great west. The first of these will be made by the Provost of the University of Pennsylvania. As Dr. Holland

has said, when the University was called the Western University of Pennsylvania it was with the thought of having in the western part of the state a University of Pennsylvania, the western one, modeled after the University of Pennsylvania in the East. It was the wise and generous provision of the charter of the University of Pennsylvania which made that of the Western University of Pennsylvania the broad, generous charter under which we operate today. I take very great pleasure in presenting to this audience Edgar Fahs Smith, Provost of the University of Pennsylvania.

Dr. Edgar F. Smith:

Mr. Chancellor, Gentlemen of the Board of Trustees, colleagues of the faculty, students, ladies and gentlemen:

On this red letter day in the history of the University of Pittsburgh may we not occupy a few moments in tracing the development of higher education in the Commonwealth in which many of us were born, in which we were educated and in which we live? The record, I fancy, will prove most satisfactory to all interested in education.

The first attempts at collegiate training naturally were made east of the mountains, and it is not surprising to find that the growing spirit in these movements was the diplomat, philosopher and sage, Franklin. More than one hundred and seventy years ago his thought took root and blossomed forth into the present University of Pennsylvania. In 1783, upon the initiative and under the directing mind of that great scientist, philosopher, statesman and teacher who uttered those memorable words, "I have been taunted and accused of being an aristocrat and a democrat, but I am neither. I am a Christocrat", Dickinson College began its splendid career and the name of Benjamin Rush adds itself to those enshrined not only in the hearts of Dickinson graduates but in the hearts of all lovers of education.

Again in 1787 at Lancaster, in the presence of the venerable Dr. Franklin, what was to be Franklin and Marshall College threw open its doors to the youth of the Commonwealth. There gathered a small but learned faculty, so learned, we are told, that two of its members, speaking different languages and understanding each other with difficulty, agreed that their conferences and their discussions should be carried on in the Latin language. Today you would probably find few institutions in the United States, even in the greatest educational centers,

where ordinary topics would or could be discussed in that language.

On the western side of the Alleghenies in 1787, if we are correctly informed, not only the university in whose honor we are here assembled, but also Washington and Jefferson, had their beginning, nurtured by clusters of qualified and learned masters whose superiors probably could not be found in any of the greater universities. These five institutions, established before the dawn of the nineteenth century, three in the east and two in the west, exerted a profound influence not only upon the inhabitants of this Commonwealth but upon others drawn from sister commonwealths, for they were known far beyond the confines of our state. Indeed the State of Pennsylvania can justly claim that medical education in the United States, which has grown to every part of our country and even to foreign countries, had its birth within the borders that separate us from New York, New Jersey, Delaware, Maryland, West Virginia and Ohio.

A further claim on the part of our state may be made for legal education in conjunction with collegiate discipline.

In the first half of the nineteenth century we discover growing up here and there in the eastern section and in the western portion of the state a goodly group of colleges, such as Allegheny, bearing the imprint of Harvard, Haverford, small in number but powerful in its effect upon character and education, Lafayette with its corps of brilliant and eminent teachers of literature, science and philosophy, Pennsylvania College at Gettysburg, devoted to the humanities, Bucknell, with rigid adherence to early Christian methods of thought and discipline, and Swarthmore, and later others which were moved to throw wide their portals to our sisters, whose collegiate education has found its climax in colleges such as Wilson and Bryn Mawr. Pennsylvania State College, a pioneer in agricultural training, under the guidance of its wise first president, laid broad its foundations of usefulness to the sons of the Commonwealth. And Lehigh, founded to foster technical education, has proved true to the ideals of its great benefactor. And here and there throughout the Commonwealth in conjunction with the humanities and with training along commercial lines, we observe the applied sciences being pursued with preëminent success. Colleges east and west whose names have not been

mentioned are by no means forgotten, for in each and every one of them were developed features which in turn made their students and graduates marked men wherever they cast their lot.

Another fact of which Pennsylvanians may justly be proud, especially those engaged in education, no matter what its particular character, is that the old fashioned four years curriculum under which most of us were developed and from which we have gone forth into the world either to continue the work or to enter some special domain of more intense work, had its birth in a college in the state of Pennsylvania. Harvard may pride herself upon her Cambridge parentage, and others upon their Oxford kinship, but the fact remains that every college in this broad land consciously or unconsciously has been following a curriculum that had its inception before the Revolutionary period in the State of Pennsylvania.

From the halls of the colleges and universities of our state have gone forth men who have affixed their signature to that immortal document the Declaration of Independence, men who sacrificed their lives to establish this republic, men who have been our country's representatives at foreign courts, men who have filled the chambers of our national Congress, men who have even reached the Presidential chair of the United States, men who have sat upon the supreme bench of the United States, men who have stood preëminent in the medical world, men who in science and literature, philosophy and history, have contributed works of lasting value. The ice-bound regions of the far north have known them; the jungles and wildernesses of the Dark Continent have felt their presence; they have traveled the great deserts and they have scaled the mountain fastnesses of the far east. Indeed, there is no portion of this continent or globe to which they have not gone. In the great field of theology they have stood in the forefront. Thousands of them, laying aside dogma, have given themselves to the service of their fellow men and to the spread of the teachings of the Prince of Peace. They remind us particularly this afternoon of the duty, the obligation we owe to our forefathers.

Upon us rests the duty of training the young men and the young women of this state, and we should not be unmindful of the fact that it is for us not only to instil into their minds knowledge but to develop in them that which is of far more value, that subtle thing called character.

And in closing, with the hearty greetings from sister institutions in the eastern part of the state to the University of Pittsburgh and with their sincere wishes for her future prosperity and abundant success, may we not here covenant anew to see to it that there burns more brightly in our halls and upon our campuses the spirit of that best of Masters, Christ, in following whom none can err.

Chancellor McCormick:

Western Pennsylvania will be represented by James David Moffat, President of Washington and Jefferson College, one of the oldest Colleges, Washington Academy having been incorporated only a few months after the Pittsburgh Academy.

Dr. James D. Moffat:

Ladies and Gentlemen:

I feel somewhat at home in this position because of my long and intimate acquaintance with Chancellor McCormick and my still longer acquaintance with the University of Pittsburgh; because the history of our two institutions has run in parallel lines and because there have been some very remarkable correspondences in this history. I have known Chancellor McCormick for a very good fraction of a century. I have talked to him sometimes in a brotherly way, sometimes even in a fatherly way, and I did not stand in awe of him as the Chancellor of a University a hundred and twenty-five years old. As one friend to another, I can say, Chancellor, I congratulate you on this occasion, the greatest day in the history of of the University. I have no fault to find with Chancellor McCormick, but I do have a fear of his tendency to go so fast. I am always afraid that he is going ahead of me and leaving me behind. We graduated at the same college. There for once I was ahead of him, but that was through no fault of his. It was due to the accident of birth. We began teaching in the same college at about the same time, but he managed to get a few months ahead of me, and I have never been able to catch up. Indeed I have feared that he has increased that temporal distance. He seems to have the power of taking two steps while I take one. When we were together we were firmly convinced that our Alma Mater was the earliest institution west of the Allegheny Mountains. But since he has become Chancellor of this University he has actually carried his University forward and is

six months ahead of us. I hardly know how to account for it. If he had been living 125 years ago it would be very clear. But there is no doubting it. This University was chartered in February 1787, and Washington Academy was chartered in 1787, but in September. There you are. And there we must abide. I can find some consolation in the fact that the men, many of them indeed, who were most active in the work of education in Washington County, who had already been teaching a classical course for six or seven years, came over here to little Pittsburgh and joined with all the men they could join with in this growing town to secure a charter for the Pittsburgh Academy. They were practicing the Christian principle of looking first of all on the things of another. They were not much concerned about their own educational prospects. They were evidently anxious to have established here once for all and upon legal grounds an institution that would meet the demands of this place which was destined, predestined, to grow. I have therefore to console myself with the thought that we have a common ancestry. And if I am not permitted to speak of my own institution as the mother of this institution I may at least call her a sister. Which is the older sister is a matter of small import. It is certain that this city sister put on long clothes of a legal organization earlier than the country sister, and the country sister has been striving ever since to keep up with her city sister.

But is it not worth noting that there was no rivalry in that early day; there was no thought of priority at that time. Those men were so concerned to establish higher education that they seem to have destroyed all evidences that would enable us to say the date of the origin of those schools. May I stop a moment to say that there were not three schools established at that time at that early day in Washington County. There was one classical school founded, but it had one teacher at one time in the Rev. John MacMillan, it had another teacher at another time in the person of the Rev. Thaddeus Dodd, it had another teacher at another time in the Rev. Joseph Smith. Each one of these original pastors built a little cabin in which to educate his students, but the students were the same in each of these academies or classical schools. It was so far a classical school that not only did they teach Latin and Greek and the higher mathematics, but they became peripatetic, and out of this peripatetic movement on the part of those early pioneer educators grew Washington and Jefferson College in due time

and the University of Pittsburgh in a little earlier time. From that time to the present I can honestly say there has been no genuine rivalry between the two institutions. Oh, a little, perhaps: in the melancholy days of November we have met upon the field of contest; we have whipped each other at different times and without much regard to rotation. But that passes quickly. We have done our work and we have furnished to the University such assistance as was in our power, and they in turn have furnished assistance to us. We gave them Mountain for their first effective principal; we gave them Chancellor McCormick, last but not least, their present efficient Chancellor.

Now there is still another reason. I have spoken of the correspondence between our respective institutions. We have been sisters in adversity; we have been sisters in poverty and neglect. We are striving now with hope to become sisters in prosperity. And we are not struggling against each other but rejoicing in the prospect that there may be a change in the good fortunes of these institutions. It is strange that there is not today a greater university in the city of Pittsburgh than you now behold. It is due to the fact that institutions have been painful illustrations of the principle that to him that hath shall be given and he shall have abundance, but from him that hath not shall be taken away even that which he hath. Our forefathers did their very best for these institutions, for they wrought in their poverty in the days when they were pioneers. Their successors did not improve upon their methods. And when this city grew more powerful and more wealthy its men of wealth became absorbed with the great things of industry, and when they looked at an educational institution for which little or nothing had as yet been done, they turned away. They even sent their money across the mountains to those institutions that had already received. East of us and west of us educational institutions have sprung up with great rapidity, and marvelous wealth has been poured into the treasuries of those institutions to the east and to the west of us. We have been left here to struggle along through the eighteenth century and through the nineteenth century into the very beginning of this twentieth century, without experiencing the very beginnings of our golden age.

Now what you need on the part of the men of Pittsburgh is a recognition of what has already taken place under the administration of Chancellor McCormick. You see that he has

selected a site for a great University, a site that can not be excelled within the bounds of the city of Pittsburgh. You see that he has outlined a plan for a University that will be comparable on its completion with that to be found in any of the great universities of the world. You see one or two of the buildings already raising their roofs to the sky to indicate what is yet within your reach. What Pittsburgh needs is nothing but an exercise of a chastened imagination. It seems impossible that the great wealthy citizens of Pittsburgh can ride along Fifth Avenue and glance upward without feeling that there is a vast power which they have never heard heretofore. It is possible, it is within your reach, to have a university in this city of which every Pittsburgher may be proud. It is not so yet. Why should it not be? Don't you bother about Washington and Jefferson College or Allegheny College or Westinster College or Grove City, any of those others here in western Pennsylvania. What we all want is a first class university in the city of Pittsburgh. It will be a hundred fold easier for us to obtain first class college equipment and college endowment. It will be easier and it will not stop here. This Pittsburgh is the center of the whole of this western region of Pennsylvania, as it is the center of the world's iron trade today. Let us wake up, put on our courage, contribute our means, put our shoulders together, put away wretched rivalry and work together, and it will not be many years until we shall come back here and rejoice in the fulfilment of Chancellor McCormick's dream.

Chancellor McCormick:

Dr. Moffat graduated in 1869, eleven years before I did. I will never again be as young as Dr. Moffat is today, and I will never catch up to him in any of the things in which he is distinguished. And I want to thank him for that splendid address this afternoon, every word of which is true. Every dollar given to any institution benefits so far forth every other institution. The nearer at hand the greater the benefit; but all over the land every dollar benefits every one.

The East will be represented by a great-great-grandson of one of the original incorporators of the University of Pittsburgh, Rev. James Finley, a brother of one of the early presidents of Princeton University. Dr. Finley, President of the College of the City of New York, needs

no introduction to Pittsburgh or to any other educational audience in the land.

Dr. John Huston Finley:

Mr. Chancellor and Gentlemen:

And some have greatness thrust upon them. In my home in the state of New York I am better known—on some occasions—and more favorably known as the father of my seven year old boy than I am in my own person. And now I have the distinction here today of being the great-great (I like to use those words) great-great grandson of my great-great-grandfather. The only great that can be associated with my name, that has ever been associated with my name, is a genealogical greatness.

I discovered on reaching here today after a very uncomfortable night in trying to get away from the east, that I am to represent the East. I am glad that I do not have the full responsibility. Provost Smith of the University of Pennsylvania has taken a large part of it, for the greater part of the east is the eastern half of the state of Pennsylvania. Chancellor McCormick did refer to the farther east. I suppose he meant that part of the east which lies between the Raritan and the Connecticut. Of course I should not assume under any circumstances to represent the farthest east, that part of the east which lies in and about Boston. And I am quite willing, except to meet the functions of the program, to have the entire east represented by Provost Smith. He is the sort of man whom I should like to have represent me. And I am sure that if we had—of course in that very conservative part of the country we do not have the initiative and the referendum; you noticed Provost Smith had some difficulty in pronouncing that initiative—if we had, of course I should not have been selected to represent the East. I am very proud of this distinction, but it has come by appointment. Chancellor McCormick had to get somebody and so he took the oldest man he could find outside of Pennsylvania. I am—I need not perhaps dwell too forcibly on this point—I am about the oldest living college president. At the inauguration of President Lowell, as I was saying the other night to President Hibben, after the ceremonies were over some very kind hearted lady came up and said, "Mr. Finley, I applauded you when you went up to present your congratulation". There was not very much applause coming from the audience, and out of her big sympathy she said, "I thought

this big college president should have some appreciation". I thanked her for the charity of her thought and told her that as a matter of fact I was one of the oldest living college presidents. And so I am here in that capacity. Of course Dr. Sharpless is older, but he belongs to the persuasion that permits him not to speak in public unless the spirit moves him. And Dr. Moffat of course is older, though you will not believe it. I have seen most of these college presidents come. I have seen many of them go. And I have seen others both come and go. And I have remained standing. I am, as I was saying the other night, like one of Priam's chiefs upon the walls of Troy, wise through time and tranquil within. I have grown garrulous, you see, through age. Yet I am not like one of those chiefs; I am not like a bloodless grasshopper. You remember the quotation. And perhaps you remember all your Iliad and can identify the chapter. I am not like a bloodless grasshopper, indifferent to the charms of these college presidents, whom I would compare with Achilles about whom all these conflicts have been waged for many, many years.

I have seen most of these universities to which Chancellor Kirkland referred this morning in that very admirable address. I think in my first experience as a college president, twenty years ago, I made a remark on Mr. Carnegie's definition of a college. I am not quite sure whether he was accurately reported or not, but this is the definition that came to me. "A college is a monastery mitigated by foot ball." And now the college of today looks out upon every interest in life. And I was reminded as the Chancellor was speaking of these units that we might say a college is an institution into which one could not get without a certain number of the Carnegie units and out of which professors could not get without a pension. This is a new definition of a college.

In speaking of Carnegie units I said to Mr. Carnegie the other night that I thought that the arithmetic of the future would include a new table of units, a Carnegie table. Forty-five minutes make an hour. Five hours make a week. Thirty-two weeks, I think it is, make a unit and sixty units make a degree. But as you university presidents of the west and you in the east are beginning to interpret the term, while sixty units make a degree, ninety units make two degrees. You will understand the import of that remark. I need not go further.

I have seen these changes. I have seen the modern university grow from its birth. I have witnessed this metamor-

phosis of the American college. I have witnessed the initiative and the referendum arise. I have seen the initiative and referendum in the face of the convention of teacher and parent. And I have seen the melancholy way of electives dissipated into troops of stars. Dissipate all these, the solution of all these various problems, and now I am confronted with the new and greatest problem, the relation between culture and vocation. But I was reminded a few days ago in reading a work of science—I am not sure whether Dr. Holland will certify to the accuracy of the statement,—but I was reading a book which told me that this problem faced the plants long before man came upon the earth, or at any rate long before man became interested in education. I will not mention the name of the plant so I will not be subject to criticism, but two varieties of a certain plant that grew in the field long before the days of Langley with his flying machine. This little plant had developed a spiral aeroplane by means of which it could send forth its seeds beyond the ancestral shadows. I think the scientific name is anemophilis. But in the course of time this plant became stunted for some reason, its curriculum became shorter, and so this little spiral aeroplane could hardly get started before it came tumbling down within the shadow of the parent and so had no chance in life.

What happened? According to this authority, the plant or some of its progeny became pragmatists, they became areopagists; that is, it grew hooks on the edges of its spirals so that they might attach themselves to any opportunity that might pass, as the wool of a sheep or the trousers of a man, if men wore trousers at that time; and the result was that the variety that had hooks upon its wings multiplied so that all the fields were filled with the yellow of its flowers, wheras the old variety did not multiply.

We say that that was a very clever thing on the part of the plant. We applaud its accommodation to environment. And yet I have been thinking, since reading that story, that there are fields in which the bodies of men and beasts do not walk; there are fields in which only the souls of men stir, as the winds in the fields. So it becomes necessary, I think, that we should nourish the old variety, that it may grow to its former height, that it may equip seeds that will scatter and grow into full development. That the potentiality of which President Hibben was speaking the other day should be put not into hooks but into wings, not into body but into spirit.

I represent this afternoon both varieties of this plant, which I think in the Far West is called alfalfa. I will not name the name here. I represent both varieties, but the institution that is interested in the development and the application of human science is the institution that is interested in divine power. And I bring to you, Mr. Chancellor, the greetings of those institutions, so far as I am competent to do so. I bring them to you here where the material ideals have been the greatest, in the hope that the spiritual fruitage, as Provost Smith has said, may be the greatest. And may I put this hope into the language of an experience which I had the first time I came to the University of Pittsburgh many years ago. I came down the slopes of the mountains on a train on wheels where my ancestors had gone on foot, I suppose. My ancestor was the first minister to settle, as I am told, on this side of the Allegheny Mountains, and to assist in the forming of a Presbytery that reached from the regions of the Alleghenies to the setting sun. I came down on the train in the afternoon. We passed through miles and miles of coke ovens, passed acres of factories with their million windows through which, through the whir of machinery and the grinding of wheels and the shriek of whistles, we came into this mighty Babel. But in the midst of the smoke and above all the sound and noise I heard suddenly the deep voice of a great bell reminding these busy inhabitants of the land toward which their ancestors had sent up the voice of worship and of aspiration, the voice of faith, which made a harmony of what were else but a jangle of hope and despair, of success and failure. And I give this as my wish, that those who come from the East through that gap in the mountains may see sitting here at the gateway of the West, may see even through the smoke, the form of wisdom and hear her voice above the noise of the city saying "Unto you, oh man, I cry, and my voice is unto the sons of men".

Chancellor McCormick:

The final address of the afternoon will be given by William Oxley Thompson, President of Ohio State University, a friend of very many years, and one who is well known in our city.

Dr. William Oxley Thompson:

Ladies and Gentlemen:—

The friendly neighborliness characteristic of the colleges and universities of the country for the past decade has arisen out of a new consciousness of a common aim in education. Every public function of this character together with current periodical literature has emphasized this common aim. The highest culture has been interpreted in utilitarian symbols. On the other hand, the most manifest utilitarian forms of education have been defended on the theory that in the matured man they produce the beautiful fruit of culture. Starting from opposite premises all parties have agreed that utility and culture must somehow find expression in character, and further that the supreme test of character is the quality of service rendered. This has prepared every advocate of higher education to emphasize the importance of public service on the part of university graduates.

The rapid development in both numbers and equipment together with an enlarged idea of possible social service has served to emphasize to persons within the university the importance of a certain "worldly touch" on the part of educators with the business interests of the community. The notion that the scholar may secrete himself from the active world is steadily disappearing. The man who professes to be able to train young men for complete and efficient living in a civilization such as we have finds it difficult to prove why he should not be effective outside the limits of the campus. Indeed, rather more than ever before the business and commercial world is finding value in the scientific judgment of the scholar unbiased by any commercial interests. Indeed, even the scholar has been discredited when a relation has been shown of a pecuniary sort. Scientific men in public office must guard well their investments if they would preserve their reputation as expert witnesses. The business world has never been more responsive to the judgment of the scholar than today. It insists, however. with entire propriety, that his judgment shall be limited to the question of fact.

Another factor that has contributed to this common consciousness concerning the aims of education is the fact that a new comradeship has sprung up among scholars and scientific men in our faculties by reason of the common experiences in the preparation for teaching. The increase in graduate study,

the activity in educational conferences and the leave of absence now being developed in our stronger institutions have combined to produce a better understanding among our educators as to the function of the university and the ends to be sought in the education of young men.

In the great west the development of the state university and of the agricultural college have united to bring these institutions into closest possible sympathy with the people and with the development of the industrial and commercial interests of the states. The most typical institutions of these classes in the Mississippi Valley have been so manifestly characterized by the spirit of public service as to attract the attention of the entire country. It need scarcely be mentioned that this public service has rendered large revenues easy. Indeed, the sums devoted to the agricultural colleges and state universities are so fabulous as to stagger the man unacquainted with the details of their service. Nowhere in America, however, have revenues been provided more willingly. The people of the West are in general agreement that the money devoted to education is not only a good investment but the surest guarantee of the safety of our democratic institutions. The graduates of these institutions have partaken of the spirit of public service and have imbibed the general doctrines concerning education to such a degree that a legislature made up exclusively of graduates from agricultural colleges and state universities would probably appropriate so heavily for education as to forget the appropriation bill for their own salaries. The high degree of prosperity in many of these states is due to the activity and service of our educational institutions and of the young men and young women who have graduated from them. The historian of the future will trace this connection with a clear and vigorous hand.

Aside from these institutions a considerable number of the most important universities of the country have grown up to their strength in the presence of great manufacturing and commercial centers. Harvard, the oldest institution of the country, cannot remain uninfluenced by the great population surrounding her. Yale and Princeton feel something of the throbbing life of the great commercial and manufacturing cities near them. Chicago has grown up in the great western metropolis. A similar result is being steadily developed in these great city universities. The university is realizing and the city is appreciating the fact that each may be immensely

helpful to the other. The city furnishes facilities that may be organized into a great laboratory of scholarly research. On the other hand the scholarly investigation of these great enterprises furnishes the basis for eliminating waste, improving products, increasing profits and for general civic betterment. The frank recognition of this possible service is the first step towards its accomplishment. It was rather easy to see that the application of science to agriculture and electricity would be productive of good. It was not so readily recognized in other forms of business or in the civic and social problems of our great cities. However, that day is steadily dawning, and despite all the sneers or criticisms made of the theoretical scholar the truth is steadily emerging that accurate theory must underlie every sound practice. Chemistry, mathematics, and physics, which is chiefly applied to mathematics, so underlie all manufacturing enterprises that capital finds the expert in these things holds the key to these profits. This principle may be more evident but not more true in the fields suggested than that sound economic theory underlies the financing and operating of our great cities. As a matter of fact the modern city is a great corporation that ought to be operated upon business principles in harmony with sound scientific theory. The control and government of our cities is the greatest problem of our generation. The questions of public health, as well as of public wealth demand the devoted interest of competent men who serve with an eye single to the public welfare. Too long have politicians regarded this great corporation as a thing to be preyed upon for private profit. It is true that human wisdom and foresight have not been equal to the problem of visualizing the needs of a great and growing city. This has made a repetition of much of the expense necessary. It is equally evident, however, that the indifference of some, combined with the ignorance of others, have permitted the practical politician to burden the people for his own profit while bringing very unsatisfactory returns to the city. The American city is now awakening to the seriousness of her own problems. Expert service was never in such great demand and never so profitable to the people.

Aside from problems of health, of wealth, of economics, of politics, that have been suggested, there is always present the problem of practicalism in every community. The University must of course minister to local needs. It should have a keener vision of these needs than any other organization.

However, the University is an institution of the world, as well as of the local community. It stands as the most complete organization of world-thinking that any community knows. To my mind, it has no more important task than that of universalizing the thought, the feeling, the patriotism, and the life of its community. This touches its intellectual activity, its moral quality, its spiritual vision, its hopes, its aspirations, its wider fellowships. The institution must primarily furnish the opportunity for its aspiring and capable youth to rise in the scale of living, but it must not conclude its efforts when it has simply made the matter of existence more comfortable, or more endurable. The wider horizon, the loftier view, should always be held before the community. By turning back the young men and young women of university training, as effective factors in building up the community, the university should return them free from provincialism, and with the inspiration of a world-view. It is true that the great majority of our citizens will be men of permanent location. The development of America has now reached the point, through the growth of her cities, and the occupancy of her land, that imported talent will constitute a smaller percentage of a city's life and efficiency than heretofore. Every city will have its own character, but the University is the agency not only to dignify that local color and character, but to give the city its world-vision, and to so prepare her citizenship as to keep a real unity in American life, while not destroying the diversity now so prevalent.

It is the good fortune, as I see it, of the city of Pittsburgh and the regions round about, that they have traditions and history, made by vigorous and virile Scotch-Irish people in the main, who have been characterized by industry, thrift, and a substantial moral quality. The problem now will be to preserve the best of these traditions, and to carry the flag of a higher life to the mountain tops. The enormous wealth produced in this vicinity may have had the effect of over-emphasizing the industrial and commercial, but let us hope that the spiritual visions which have been eloquent in the churches of Western Pennsylvania for a century, will take a new lease upon the future, and see in her University here an opportunity beginning on the streets, and reaching to the heights of moral and spiritual excellence.

And now, Mr. Chancellor, it is from this spirit of public service on the part of the Universities, and mutual helpfulness on the part of both people and Universities, so characteristic

of the great West, for which you have been kind enough to ask me to speak, that I stand here today and extend the hearty congratulations of the regions beyond the Ohio River, and assure you that the highest achievement and the greatest success on the part of this University in serving the vigorous constituency of Western Pennsylvania would be a matter only of joy and satisfaction to your neighbors in the West. Education begets a desire for education. Every institution that gives its environment an uplift helps every other institution to do the same thing. I hope that the generosity of the great West in higher education may stimulate the public spirit, the civic patriotism, and the generous impulses of this wealthiest center of modern civilization. May I venture to express the hope that your years may be many, that your bow may abide in strength, and that the rising power and influence of the University of Pittsburgh may demonstrate that the chief glory of this splendid city will be found not alone in her material industry, her commercial supremacy, but in the lofty idealism of her citizenship.

Following President Thompson's address, Chancellor McCormick announced that owing to the lateness of the hour, it would be impossible to present the delegates of the several institutions. Those delegates who were to present written messages from their universities were requested to present them to Dr. S. B. Linhart, Secretary of the University, at the close of the exercises.

The Chancellor then presented Dr. Friedrich S. Archenhold, Director of Treptow Observatory, Berlin, Germany, who spoke briefly. At the close of his remarks Dr. Archenhold presented the University with a portfolio of photographs of comets, about fifty-five in number.

This closed the exercises of the afternoon.

ALUMNI BANQUET.

The Alumni Banquet was held on Wednesday evening, in the banquet hall of the Soldiers' Memorial. The ladies who were present as guests took dinner at the Hotel Schenley, and came to the banquet hall immediately following, occupying the south side of the balcony. The remaining three sides of the balcony were filled with students of the University, who took dinner in another part of the building. The total number of those present exceeded twelve hundred. Mr. Charles Wood-

ruff Scovel, '83, served as toastmaster. After the invocation had been offered by Rev. George Black Stewart, D. D., LL. D., President of Auburn Theological Seminary, Mr. Scovel extended the welcome of the University and the Alumni Association as follows.

It becomes my gracious duty to extend the welcome of the University and of the Alumni Association first to our distinguished academic guests who have gathered from far and near to greet us upon this anniversary, in numbers and in quality such as perhaps have never assembled together in the city of Pittsburgh. We are profoundly grateful and appreciative of their presence tonight, and of the trip they have taken to be with us. We also extend our welcome to the citizens of Pittsburgh apart from our own ranks, who are here to show that the University of Pittsburgh is the University of Pittsburgh. And to the ladies, we are glad to extend the cordial greeting and appreciation of their presence, which lends an air of distinction and grace and charm to occasions that they would not otherwise have. And particularly and closest of all, we want to extend our right hand of fellowship and welcome to the twenty-six new-born honorary alumni that today received the classical sheepskins. Thirteen of them, the same number as the number of colonies and states that were in existence when they were incorporated, come from institutions older than ours. There are only fifteen or sixteen such institutions in the country, and thirteen of them are represented tonight. From old Harvard, of 1636, one hundred and fifty years before us, down along the coast to Georgia, two years older than we. We are very, very glad and proud to have the older institutions send their representatives and to have them given the new mint and stamp and coinage of Pitt with an honorary degree today.

I do not think that the toast master ought ever to make a speech. I believe he is perhaps expected to tell a story after his welcome, and then to introduce people and sit down. And I want to tell a story tonight, a story that dates from 1787 really. It was told to me by my father, who got it nearly fifty years ago from a then very old minister of the Presbyterian Church, who remembered it from the time at which it dated, the last part of the eighteenth century. The story concerns the Rev. Dr. John McMillan, who was then called the Bishop of Western Pennsylvania, who was the Pope of Western Pennsylvania, some times, the man who was undoubtedly the greatest character in this corner of the State at that time, and one who es-

tablished the little log school that since became Jefferson College and part of Washington and Jefferson. The story portrays a time when Western Pennsylvania was devoted not only to religion and education, but to whiskey. It happened that one morning Dr. McMillan and two younger clergymen started out from Canonsburg to ride across the country to Presbytery. And they rode along together with many merry quips and jests, passing the time until they came to a little inn and sitting on their horses, they called the postboy out for stirrup cups. He forthwith brought out three brimming tins full of whiskey. Father McMillan handed his to one of the younger men, while he put up his hand, closed his eyes and said grace for what they were about to enjoy. You can picture his feelings as he reached out his hands for the cup, and it was empty. The younger man had drunk both. He looked at him a moment and said, "Father McMillan, the good Book says you should watch as well as pray".

I want that to go down in the annals of this anniversary. I do not think that it has ever been recorded and the tradition is good. It comes from the time and if not true, it might well be true.

Mr. Scovel then proceeded to introduce the speakers of the evening, as follows:

It is our very great pleasure to have with us tonight as the opening speakers three wise men, college presidents all, but only two of them from the East. The first wise man who will address us is from the West, the far golden gateway, the far extreme of that whole great northwest territory that was opened to education and religion and culture by the ordinance of 1787, passed in Philadelphia in the same year that our charter was granted. From Pittsburgh to the coast now spreads the noble empire of state universities that had their origin in that ordinance of 1787. And it is a great pleasure to us to welcome Dr. Wheeler, a great Greek scholar, as all know, and for many years a great administrator of a great institution.

The American University.

Benjamin Ide Wheeler, President of the University of California.

Mr. Toastmaster, Ladies and Gentlemen:

All greetings to you, University of Pittsburgh, the best greeting that the Golden Gate can bring to the Iron Gate. You

are the source. For these splendid waters that struggle by your doors to find their way into a confined ocean shall yet have a highway open to them so that you may come from Pittsburgh by water clear to the Golden Gate.

But I am told to speak on the American University. Nothing can be called an American University, except as it be an institution that serves the purposes and well-being of the American people and American society. An imported university in this land would look like a dog-cart or a sole leather trunk in the ark. It is characteristic of the American temper, of that which we call Americanism, to set personality ahead of accumulation, learning and good old-fashioned horse sense ahead of unused stores of pedantic knowledge. We are used in this country to rate men for what they are. We are used to rate them for what they can do. The American people in American society are not well disposed towards specialists merely and marvels who have no power to judge or to do. The American people care for men as men, not as accumulations of learning, not for book learning. American society will not approve of an education, which having trained a man for instance to drive a stage coach contemplates forbidding him to be, if need shall demand, a chauffeur, even if that system has been glorified under the most recent of all pedagogical fads, the fad of vocational training; vocational training I say, that latest of pedagogical fads, the legitimate successor of—what shall I pick out of the long list?—of inhibition and adolescence and all the fruits thereof. Americanism prefers that a man who has failed at preaching should have the same opportunity for him to go successfully, for instance, into life insurance.

We are not yet far enough away from the frontier to be free from the glamor and the joy of that old-fashioned New England thing we call "gumption." When we were boys we all used to learn to drive a nail; and now nobody, unless he is trained for it, can drive anything except a finger nail; and he has to take a full course in driving nails in order to arrive at all-roundness. Do you remember perhaps, some person down east who will correspond to my man Fitzpatrick that I knew down in the Island of Mt. Desert? He kept a grocery store, and on one side was the grocery and there were calico and thread and needles, and on

the other side there were oatmeal and flour and sugar; and he kept also the post office and tried to keep up with reading all the postal cards; and in back of the shop he had a pool table, and he used to keep track of the score on the pool table; and upstairs, up a rickety stairway over the pool room, he had a chair which was occasionally used as a barber's chair, and he shaved the fishermen and the farmers of Mt. Desert. Then over at one end he had a storehouse full of chairs, and we wondered why with his slender stock of provisions he had chairs in such multitude. And when the whistle blew in the offing and the steamer came in, he used to hurry down to catch the cable when it was thrown over, and hurry alongside with his bundle of yellow papers in his hand—for he was the Adams Express Company agent and also the agent of the steamer; and when the steamer was tied, he went back to the shop and got a boat and rowed out a little way in his boat and pulled out the lobster trap, to see if mayhap he had caught anything. Down in the house he had a place for drying fish, for he cut up and dried codfish; and in the loft over that, he had a place where there could be a dance. Mrs. Fitzpatrick and he had a house right alongside the grocery store, and she kept boarders and took in the people from Boston who came down there and turned many an honest penny in that way. When the boarders needed a little more modern improvement in the house, he got this stuff and put it in himself. He went up to look into a store and studied how these things from Bangor were put in, and that is the way he did it, and he did it pretty well. That was Fitzpatrick. He had what I call gumption. The American people are never going to stand for a method or a style of education that does not involve after all, some adherence to the old American standard of gumption. Horse sense, after all, consists merely in passing stern judgment on the recurring phenomena in a large range as they present themselves in life, in the midst of life; and there is no reason why young men should not be trained to pass honest judgment on things as they occur. But we shall not get them to pass very sensible judgment by the training we usually apply for the rearing of a specialist.

A second characteristic of the American temper is a willingness—somewhat theoretically to be sure, but very practically, nevertheless—a willingness to judge by the individual, rather than the class; and the American people will approve of

no institution, no form of education, which strengthens the lines of the classes. Rather the American people will expect our universities for which they stand, to sink a shaft straight down athwart the crystallizing strata of the castes so as to allow the boy that shows himself at any level to rise into a realization of himself in life.

The third characteristic of the American temper is to rate service according to its usefulness and not according to the field within which it is exercised. Americanism knows no aristocracy of subjects within the curriculum. They all sit down together. They all rejoice together. It is a great discovery that technical instruction could be of advantage of itself and advantage to classical lore taught in the same institutions. That is Americanism and that is the way of the American university, according to the approval of the mind of the American people. That same Cornell University, which was founded for any man and any subject, is the university that prints in the bibliography of the annual writings of its professors, the titles of "The Gantenian Dialect", and "How to Set a Hen"; printing them on an equal footing, so long as the hen is scientifically and effectively set.

And the fourth characteristic of this American temper which is bound to have its hearing as fundamental in universities which Americans approve of, and which can be called the American University, concerns the aspects of faith. We as a people believe in betterment. We came from the old world to find a better country. We believe that things here, so far as they retain blood in them, are growing better. If anything is not growing better, we appoint a committee to find out what the matter is, and if it is a town, we appoint a committee to make it grow, because we believe that the center of things in this world is not the forms which lie about them in matter, but the living soul of man, that creates, and it is the faith of the soul of man that makes things to be. It creates, it lays low the mountains, it stops the mouths of lions. We are optimists. We know that they tell us that the optimist is a man who falls out of a five-story window, and on his way to the sidewalk he shouts, as he passes the second-story window, "So far all goes well". You never heard yet of any man who was the better for growling. You never yet knew of any boy who was built up by finding fault. And we as a people, either spiritually or politically, are through and through optimists. When a man

has been beaten at the polls, he smiles next day. When a man's party has been beaten at the polls, he says, "Well, after all, I suppose it was coming to us; it was due us; perhaps it would be just as well that we elected that man Mayor. I thought he was a pretty bad man. I said pretty hard things about him on the stump: but he will feel the responsibility of his position; I think he will do pretty well. At any rate, we will wait until the next time". The American people believe in making the best of things. That is why Democracy succeeds with us. It succeeds with us because we know how to forbear, because we are optimists, because we believe there will be another chance. And that is going to be the spirit of the University that shall be called American. We make the boys get on because we encourage them. We believe in good cheer. We believe in loyalty to the University. The ring of those voices, voicing the cheers for old Pitt are a hint of this University. And there is no doubt about it. I know they do not usually in all the universities of the world, and it is not absolutely necessary that a university, in order to be a university, should be howling all the time; but it is good in America to keep the heart light. It is by faith and by hope that we have built. We have had a tussle in this country, and we have some tussles ahead of us yet. We have some of our fellow-citizens whom we ought to hang, but we ought to do it in a kindly and joyful spirit. And it is when the joy abounds, then we move ahead. I recommend to you the abounding spirit of joy and loyalty wherewith to build up these institutions that have in their hands the making of this country. What this country is to be, what is to issue out of this strange experiment of Democracy, will depend upon the spirit of the universities. The universities have got to give the nation its leading men. That is what the universities are for.

The American University is appointed to train up men of light and leading and gumption. It is appointed to bring in the light of truth and to defeat ignorance, superstition, prejudice and the stampede. It is appointed to take this superabundant vitality of the carnal, sordid usefulness of this America of ours, to take it sternly by the nape of the neck and face it toward the truth and hold it up to its duty and its job.

Toastmaster:

They surely do have big things in California beside the redwood trees, and smiling, sunny things beside their

skies. I want you all to notice the mystic figures at the end of the next line on the program. Sc.D. '12. We come now to our baby alumnus, who received his honorary degree from Pitt today, and tonight is one of those whom we welcome among us as belonging to the alumni circle. It seems natural to me to think of him as a baby alumnus, for I first remember him as almost a baby in the home of his father, the ever venerated Thomas Ewing, President Judge of Common Pleas Court No. 2 of Pittsburgh, and one of the most profound jurists our bench has ever had. For the sake of his father, he would always be welcome in Pittsburgh, even if he had not, for himself, shown himself a leader in medical progress, a sort of professional pathological pathfinder.

The Medical School and the Public Welfare.

James Ewing, Professor of Pathology, Cornell University Medical College.

Mr. Toastmaster, Alumni of the University of Pittsburgh, Ladies and Gentlemen:

An obscure pathologist, drawn from behind the barred doors of the laboratory and required to discuss such a topic as the relation that the medical profession bears to public welfare, being decorated by an undeserved honor such as your University has given me today, and even though encouraged by the special song prepared for the occasion, may I think, well shrink from the task that is placed before me. For I may as well admit that in my opinion, and in the opinion, I think, of my medical colleagues, if you take away from the public welfare medical education and medical science, there is very little chance left for the public. I am unable to explain why among these brilliant auspices I find myself really appearing here placed before and among expert after-dinner speakers. I cannot under any circumstances attempt to reach the level that has been maintained throughout the two days' session so far transpiring in this anniversary. I am a pathologist who is accustomed, and who is glad, at least, to work as much as say a year to make up very carefully the question of what he is going to say, and then finally decide to say nothing at all.

I have never gotten over the impression of my youth, that an alumni banquet or any public banquet is really very much like an Irish wake; the only real fortunate is the extemporaneous deadhead. Casting about for a name to this honor

which is thrust upon me tonight, and which does not fit quite so comfortably on my shoulders as the yellow hood did this morning, I happen to recall that I am a graduate of the Second Ward Public School in Pittsburgh. That public institution made a very strong impression on me. As I remember it, the impression was conveyed chiefly and often by means of a set of rattan rods of assorted sizes.

I think most of us improve under that regime, because as I remember it today, the shorter my stature and the thinner my pants, the longer seemed the rod, and the more vigorous the right arm of the principal. After thirty years' experience in other institutions, I can bear witness that the reputation of the educational standards of Pittsburgh in those days was very fully justified, and that they bear very favorable comparison with those of any of the cities of the effete east. I cordially testify that the close and intimate contact between pupil and instructor, of which President Hibben will no doubt tell you something, that tendency of the instructor to impress his ideas upon the mind and body of the pupil, much as the carpet beater impresses the flail upon the dusty carpet, is one of the most important principles in youthful education.

I suppose the opportunity to speak tonight was given me in order to get back at the educational system of Pittsburgh. Now I have a chance to say something about what I think regarding the relation of one branch, medical education, not a branch in general education, a branch in which the rod has been replaced by the glass, in which very serious young men engage in what I believe is one of the most strenuous pursuits of the day, the pursuit of medicine. I do not make the claim for recognition of modern medicine and the higher-medical education, that today is based successfully upon the past triumphs. The control of epidemics, the rendering habitable of the uninhabitable portions of the earth, the triumphs of surgery which appeal readily to the public mind; the great advances in the medical sciences of which the public knows little, but which are responsible for increase in the tenure of human life, twenty to twenty-five years of each individual as compared with what it was eighty years ago. All these are directly the fruit of the higher medical education, which teaches a man not only what is known, but equips him to discover in some measure what is unknown about disease. The real claim for recognition of university medical education is, I think based on the promise which it makes, not only to retain the ground gained, but to

deal successfully with the unsolved problems of medicine; to take the biological sciences and place them upon the same level as is now occupied by other sciences, physical engineering, industry courses, and above all the liberal arts, for it does not require any expert knowledge to see that mankind has progressed far more along the lines of material and general intellectual progress, than it has in medicine. We clothe our bodies in fine raiment; we surround ourselves with luxurious living; we load our tables with luxuries from every land; we whirl our bodies through space with electric engine and gasoline motor, and the aeroplane; in the ocean liner we laugh at the wildest ocean storms. We have overcome most, or many at least, of the grosser obstacles which surround our physical environment. But when any one of us falls sick of any one of a score of what I may say are the natural diseases of the animal body, then we are in much the same position that our forefathers were. We have diabetes and Bright's disease; there is such a thing as cancer; and we suffer from them just as they did a thousand years ago, and the man drops off very much as the dog does today, with very little better chance. The dog, by the way, suffers from these diseases very frequently. Why, Herodotus states that Pelocedes, a writer about 500 B. C., addresses Atossa, speaking of a cancer. Take another example: the western farmer writes to the Board of Animal Industry at Washington, and receives explicit directions as to how to improve the quality of his cattle. He goes ahead and does it. Then they supply him with a new and improved strain of oats, corn, potatoes and apples. But the farmer himself may very likely be suffering from a partly healed tubercular lesion which has reduced fifty per cent his productive activity throughout his entire life; among his children is perhaps one consanguinary idiot, perhaps a congenital epileptic; his brother's family contains a case of gigantism; his wife has been a nervous wreck all her life; and he accepts all this situation with perfect equanimity. He considers them as visitations of a divine providence.

I know how the freshman comes back home and tells how much he has learned in college. I do not pretend to speak with any knowledge of the advance sheets of medical research; I say only what every practitioner, at least every laboratory man, knows. I speak as a man who has twenty-five years experience in close contact with the rampant march of physical evils in municipal hospitals, in the homes of the masses, and in the

great houses of the rich. I see the same scenes enacted in all of them; in fact, cancer is today at its worst in the houses of the rich. I tell you we have a long way to go before we have done our full duty to the needs of humanity, and before we have accepted the promises of medical science to deal successfully with mental and bodily infirmities.

Of course my remarks bear an occupation stigma. My life has been spent in contact chiefly with the darker side of medical activity as a research worker, constantly face to face with problems that are unsolved, and I find many of them unsolvable. Nevertheless, I do feel that this twentieth century has not done its full duty to the demands of medical science, has not made sufficiently great preparation to meet the demands, to meet the problems which medical science has laid at its door. And this is the great burden of my remarks tonight. I believe that the claims of medical science, with which I consider the higher medical education, can be placed broadly before the unlimited resources of this and any other community. I do not want to make unpleasant comparisons. We boast today, however, of the material resources which America puts at the feet of medicine. It is a matter of fact that they are very far inferior to those available—I will not say in Germany or in France, but let us take Italy and Hungary. In the city of Budapest the medical department of the university occupies about thirty acres and includes about thirty-five buildings, each fully equipped for the particular branch of medicine. There is not a single branch that is not properly represented. The same general situation exists in Vienna. And it is under those circumstances that the Italians and Hungarians are attempting to meet the demands of medicine. Is it too much to hope that some American communities may take the proper steps to meet these demands in some such a way as is done by our almost contemned neighbors, the Hungarians and Italians? I am no prophet, but I think the reward of such work would be sure and swift.

For one thing, the creation of a great medical institution of this type would create a most brilliant and very necessary object lesson to the public which it serves, to place medical science and higher medical education in its proper position, as an instrument telling for the public welfare. I think such an object lesson is much needed. It would tend to draw into the ranks of medicine and into the ranks of medical science the best brains of the country, instead of recruiting those ranks

from the non-conformists and the idealists. Incidentally, it would greatly enlarge the standard of medical practice. I do not mean merely that it would result in the saving of an occasional life, limb or organ. It would restore the medical practitioner to his proper place in the community.

I sometimes think that in our habit to apply utilitarian standards, clinical medicine at least has lost much of the best that was in it. I believe any man that pursues any one of those clinical branches only so far as he is of use to his patient, will never reach great distinction. I think history proves this. I look back over the distinguished physicians of medical history and find that they pursued their branch for the sake of the subject itself, and very far beyond any utilitarian standard. In a little town in Germany, and also in Berlin, there is a great bronze statue to Van Greve, a doctor whose services in ophthalmology became so great that they became recognized as services to humanity, and he was recognized in this way. I know that the French nation found in Claude Nau not merely a physiologist, but, as one of his contemporaries said, physiology itself, and when he died a eulogy was pronounced over his bier in the Chamber of Deputies, and the whole French nation went into mourning as his body was carried to the grave.

And this is what I mean by following a branch of medicine far beyond utilitarian science. This is the reward, and this is what could be possible only in a great medical institution. Suppose that such a medical institution would call for the creation of a school of sanitary science, so that our sanitary interests could be administered from top to bottom by trained medical experts—for public hygiene is a medical question for university trained experts. Suppose it meant providing our courts with a school or an institution of legal medicine. There is not one in America, and yet every country has its peculiar needs, and furnishes its peculiar facilities for this very important branch. I am told that the study of juvenile delinquency goes far to transform one of our criminal courts into medical clinics, as Lombroso says, and I am quite sure the only practical side of the question of eugenics, is the creation of institutions under university control for the study of defective children. It has been asked, and I say it with great reverence, which of you by taking thought, can add one cubit to his stature? Now a cubit is a good deal. I used to think it was several inches. As a matter of fact, it is from fourteen to eighteen inches, depending on the arm by which you measure it.

While I can not say that fourteen or eighteen inches can ever be added to the stature of any human being, yet I can say that it is a well authenticated fact that in many instances we can completely transform the outer stature of human beings by excising the thyroid; and I do think much of that new doctrine that the glands of internal secretions are instruments to give us far greater control of growth of mind and body in the human subject, than we have ever thought before.

One other word. The creation of a great medical institution seems to me to call for an awakening of the whole public conscience on the question of the pressing needs of humanity in the realization of the fact that the means and methods we are now applying to these questions are wholly inadequate, and to the recognition of the capacity of modern medical science to deal successfully with them.

May I close with one more reference. You have had a great occasion here in Pittsburgh the last two days, one of the most suggestive I have ever had the pleasure of attending. I have listened with great interest to the discussions of the great addresses that were given yesterday, those notable thoughts regarding culture, those great ideas regarding higher education. I witnessed the degrees that were passed around this morning so liberally, to one at least, who did not deserve it. I have been greatly impressed with the spectacle. Foreign communities have been represented. Every branch of human learning has had its say. Great questions have been expressed about the plans which are being laid, which, I think, tends to show that we have in mind something that university education will readily enable mankind to realize the perfect life on earth. Isn't that the object of our education? When I listened to all these, I gained an impression which I hardly dare speak about. I came to the conclusion that we would be making a failure of it, we would not succeed on the present method. I think, gentlemen, you are calculating without taking into consideration one very important element. I refer to the influence of the spirit of physical evil.

Let me illustrate what I mean. Many years ago the French nation went down to Panama to build the Panama Canal. They called in all the sciences of France and the civilized world at that day. They planned this move with great care. They were backed up by unlimited material resources. They went there with giant cranes and engines and ships and everything was prepared to accomplish this

great task which is the greatest gross task which humanity has ever undertaken. If any one had told them they were going to fail because of the existence of such a humble bug as the mosquito, he would have been thrown into the insane asylum. Yet this is exactly what happened. They calculated on everything except a mosquito, the object that causes malaria; and on account of their failure to deal with that, the whole project failed. Yet America a few years ago sent down exactly the same paraphernalia and she succeeded because medical science had dealt with the mosquito. And I believe that the same situation exists in many other most important human interests. I believe that if we are to reach the goal at which we are all aiming as educators, we must deal more successfully, more thoroughly and in a much larger scope with this problem of physical evil.

Toastmaster:

Princeton University is really our grandfather, and we turn from one extreme, from the baby alumnus to have a greeting from that institution, whose sons it was that planted the Pittsburgh Academy in 1787 and made in its Board of Trustees and in its faculty an overwhelming majority. It is a great pleasure to hear from a representative of Princeton, one who has written long and written much on philosophy, and who will need all his philosophy to buck the Tiger, I do not doubt; and one whom we are particularly glad to welcome here, as we would any President of Princeton, because of the great acclaim which within and without the University was heralded when the executive head finally went to a Princeton man, Dr. Hibben.

The University Man.

John Grier Hibben, President, Princeton University.

Mr. Toastmaster, Mr. Chancellor, Members of the Faculty of the University of Pittsburgh, Ladies and Gentlemen:

Princeton University as the mother, brings the heartiest greetings to the University of Pittsburgh, a child of over a century ago. At this time, however, Mr. Chancellor, you have come to the sturdy years of your manhood and of your propressive development as a University, and to the processes of continued realization throughout the years to come. In the story that was told by the Toast-master of Father McMillan praying over the whiskey, I wish to add that the man who

drank that whiskey must have been a Princeton man, because, as you know, most of the ministers of that age went out from the College of New Jersey, as it was then called, across the Alleghenies, into this region. The other day, in looking over a book called "Princeton Men of the Eighteenth Century," I noted that these early pioneers in preaching the gospel and in education, were always called missionaries to Western Pennsylvania.

I am speaking tonight to the sentiment of the University man. If any one here does not know what the University man is, we can at least begin as every man in the region of scientific research in the laboratory begins, with a man in the germ, a man in embryonic state, and there you have him, strung along the gallery, the University man that is to be. And that which has been the characteristic feature of this gallery performance tonight, I believe to be the most essential and characteristic feature of the University man, wherever you find him. The man of older years, he is a man who is on fire with the enthusiasm of devotion and of loyalty to his Alma Mater. Only the other day at a large gathering of the Princeton men of New York City, some eleven hundred strong, a man of that company said, "Is it not possible that we are emphasizing too much this question of college spirit, of enthusiasm and devotion to one's Alma Mater?" And in reference to any such sentiment I would say emphatically no, and no again. It is a great thing, gentlemen, in this commercial age in which we live, with its materialistic drift, with its clack of utilitarian value, that somewhere, deep hidden in our hearts we have a fire and a light of loyalty, a sentiment merely you may say, a sentiment, however, that has a powerful influence over a man's life. Out of this deep soil of the soul there springs the white flower of loyalty, and where we have the loyalty in a man's heart to his Alma Mater, we have but one phase of loyalty in his life, for loyalty is not many, but one. The loyalty of a man to his family is one, to his wife and children; the loyalty of a man to his friends, to his community—there are not five or six different experiences, five or six different sentiments in a man's life; it is one sentiment, a sentiment of deep devotion and of love of something that is not merely in the man's own sense of comfort or of conveniences or of pleasure or of consciousness of individual power.

It seems to me to be but a natural and inevitable and logical transition in a man's experience from the loyalty he bears to the Alma Mater, to the loyalty he bears to the community, and I believe that it is in the midst of college men that you will find this loyalty in a larger sense as perhaps among no other class of men in this country. Loyalty to one's country! How is the university man to show it? Fifty years ago the manner of showing that loyalty was without question. We meet here tonight in this Soldiers' Memorial Hall. The older men here may recall those stirring times. Those of us who fifty years ago were in the process of being born, cannot recall it; but I for one, thank God, that my father had a part in the manifesting of his loyalty during the Civil War and died on a battlefield after the battle of Ft. Donelson. He has never been a memory to me, but he has been a very precious heritage. We who have this heritage, how can we show our loyalty to our country? The great danger, gentlemen, is that we speak of loving our country, and that we sing fervently "My country 'tis of thee, Sweet land of liberty"; but we lose the sense of responsibility to our country because of its large area, stretching out to the Golden Gate. And this is my message to you as a University and as University men who are to be; translate this larger sense of loyalty in its extensive conception into a more intensive conception, and let every man say to himself, "I serve my country, the whole great American nation, by serving in some way, even though a very slight way, the particular community in which I happen to be". You who are citizens of Pittsburgh here tonight, when you sing "My country 'tis of thee", you mean as regards your duties and your civic responsibilities, you mean this community of Pittsburgh. There is the scene and there the sphere of your loyal activities.

I was told a story not long ago by Professor Steiner,—the man who, perhaps, more than any other man in this country has served efficiently and wisely the cause of the immigrant. He said that not long ago he was traveling in the anthracite region in Scranton, and he met a miner there, and the miner said to him, "I have a son in college. I am sending him to Harvard". Professor Steiner said to him, "My dear man, are you not doing this at too great a sacrifice to yourself and to your family?" And the miner said, "I am. We are sacrificing everything that we can possibly sacrifice to send that boy to college". "Why is it" the question came, "that you wish your son to have an education?" And the min-

er replied, "I wish him when he has been graduated from Harvard, to be able to look every man in the eye and tell him to go to hell". Now, gentlemen, we can all understand the feelings of a man when life has been a hard struggle, who has never had an opportunity in his own life, never a privilege. But that certainly is not the attitude of the University man to take, who goes out of halls such as these, the halls of privilege, into the community that he is destined to serve. He cannot merely cut out before him his own career, regardless of all considerations for the men about him, pushing one man to the right and another to the left, in order that he may push himself forth; and if there is a man in the way, saying to him, with arrogance and with scorn, "Go to hell". That, I take it, is not the mission of the University man. I believe that the University man must follow in his life and realize in his activities the ethical creed of an English philosopher, Professor Thomas Hill Green, head of Oxford, one of the most profound of all the students of the theory of ethics. He said something that to me is most practical, that "This is my ethical creed"—and I recommend it to all University men here tonight, but practically to those who are going out into life—"to practice what is true, to do what is right, to make what is beautiful"—and this is the point of the whole thing—"and to give myself to some form of social growth." There is the responsibility of the University man,

There has been great talk here today about vocational study, and a remark has already been made by the first speaker of the evening. I wish to say that Princeton has been on record today, I trust may continue into the indefinite future, to stand above everything else, for vocational study pure and simple. I wish to tell you what we understand by vocational study, what I think should be understood when the word "vocation" is used—for it is a great word; it is a significant word—it does not mean the specific pursuit of the profession or business of a man here or a man there; but the vocation of man means the common calling of a man, to take his part and his place in the community in which he lives, in the service of his fellow man. That is my interpretation of the word vocation. It is not mine. It is the interpretation of the great German philosopher, Fichte. He puts it in one word. It is faith. Faith in a message that you can bring to human beings, and faith also in the human beings or in the possibility of their education in the scale of humanity. The great educational problem today, I believe, is

this: How can we put into our students, as they leave the halls of learning, this human element, if you please, this human passion, the desire to touch in some measure, and to touch for good, the lives of mechanical engineers, mining engineers, electrical engineers—whatever he may be studying, he must come in contact with human beings; he must understand human nature, and he must have his heart full of sympathy for the needs and the distresses of humanity; that is, if in his profession or pursuit he is to be a man as well as an engineer or an instructor or a teacher or a man of affairs. We must give our young men power. The great call is for men of efficiency, men of power; but I tell you, gentlemen, we are not as educational institutions serving this country in which we live if we give men of power merely. With the power must be also, it seems to me, this sense of responsibility for the use of that power. Efficiency, yes, but if I may so put it, let the efficiency of the university man be a consecrated efficiency, consecrated to the welfare of his fellow man.

But one word in conclusion. This is the one hundred and twenty-fifth anniversary of the founding of this great institution. It was founded at a time when the great institutions of our land were forming themselves together into the great nation that we love, and to which we pledge our loyal allegiance. It seems to me that as we speak of loyalty, and as I have spoken of loyalty to our fellow men, we must also from time to time emphasize in the minds of the University man a sense of loyalty to the institutions of our country. In some men's minds it seems as though there could be an appeal from time to time from the institution to the will of the people. But my friends, we must pause to think that at the time this university was forming, the will of the people, that had been gathering together for generations, formed itself into our great institutions; and there is a sense of stability and permanency about the will of the people when it finds itself and finds expression in our institutions. After all, there is nothing eternal, as regards the expression of truth when we come to the institutions of a free people. And to borrow again an idea from another great German philosopher, Hegel: the eternal truth of all the ages finds its expression in the consciousness of a free and united people; and while that eternal truth has found this permanent expression in the glorious institutions of our country, let us all as univer-

sity men, pledge our allegiance anew to the country we love, and to the institutions that represent her.

Toastmaster:

When three or four years ago, the University adopted the formal title of University of Pittsburgh, it was not a change of name, but a restoration of the original name of Pittsburgh that we bore at our christening. Pittsburgh and the University, one and indissoluble, from the beginning to the end. Neither can develop to its fullness without the other. They sometimes refer to our new governing body as the nine muses, but we cannot find any nine gods of Olympus there of an industrial character. The one that I can think of was Vulcan, and it is perhaps one of that type that we have with us, one who has been a strong man in the manufacturing industries of Pittsburgh, who has forged iron chains into one of the Garlands that we wear proudly in our industrial supremacy.

The City and the University.

Robert Garland, Member of Council, Pittsburgh,

Mr. Toastmaster, Ladies and Gentlemen:

I am asked to speak on the City and the University. I presume that I am expected to speak just a little more about the City than the University by reason of being one of the City Council. And you have already heard much about the University.

I might remind those of our guests who are strangers here that the present City Council is very young, and I have only occupied a seat in it for a few months,—remember, now, I didn't say that I *filled* it.

Ours is not a government by commission. Besides having a small Council of nine members, we have a Mayor, and the different Department Heads.

Now what is the connection between our City and our University? To a large extent each is interdependent upon the other. The more renowned the City, the greater should be the University, while the success of the University reflects credit upon the city as a place of learning, in addition to its other well won attributes. Having the name of our City in your corporate title, should also be of great benefit to the University, as the name of Pittsburgh is written in strong characters in all parts of the civilized world. If there be anything desirable in a combination of theory and practice in the teaching

of the Industrial Arts, no better location could be found for a great University than the City of Pittsburgh.

These are the days of achievement in applied knowledge. There is yet a great deal to be accomplished in engineering, in mechanical, in chemical, and in electrical lines, and there is as large a field for the young man as there ever was. There are more laboratories in the Pittsburgh district, where metallurgical and electro-chemical tests and experiments are being conducted, than in any other locality in the world. The alternate class work and shop work, the visits to the diversified mills and factories of this vicinity, where the actual working may be studied, are of considerable help to our University and its students.

You have your School of Economics, for commercial, industrial and financial training. You have your Department of Industrial Chemistry, and I understand that one of your studies in this Department is that of Smoke Abatement.

We have been known as the "Smoky City"; and to tell you the truth, some of us old-timers gloried in the title. The more smoke we had, the greater we thought was our prosperity.

But modern ideas prevail, and we have awakened to the fact that smoke is not only harmful in many ways, but it means inefficiency, and a wilful waste of good fuel. Its abatement would also result in a small revenue to every householder, and the women would welcome a cleaner atmosphere for the sake of their wall paper and their lace curtains.

The City authorities are engaged in the enforcement of the Smoke Ordinance, and it is unnecessary to say that we will welcome any assistance which your special corps of engineers may render towards solving the problem of total elimination of what we are now pleased to call the Smoke Nuisance, but which in the old days was considered rather a badge or a smudge of honor.

We live in an inventive age. It is unnecessary in this presence, nor will I take the time, to dwell on the many inventions and discoveries which have marked the history of the world since this University of Pittsburgh was chartered. Within the memory of even the youngest scholar, the wireless telegraph has been perfected.

Now, just a word to the faculty and the students of the University. I understand that our students come from all parts of this country, and some from foreign countries.

The American boy must not think that we in the United

States know it all, or that we are in any way superior to the foreign countries, even in industrial knowledge. The City of Pittsburgh is world famed. If the "Father of his Country" could visit us today, he would find the Ohio River a great waterway, carrying over ten million tons of freight annually, and destined to be a direct line of communication, through the Panama Canal, with the Pacific Coast, the Orient, and the western coast of South America. Somewhat different from the Ohio River of one hundred and twenty-five years ago, when a few canoes danced on its waters.

He would find Pittsburgh, the strategic point, which was coveted by the French and the English, the place of greatest tonnage in the world, surpassing the combined tonnage of any other three cities or ports on the face of the earth.

Our City is great industrially, and she is made great by the backbone of her unparalleled industrial district, but don't let us be too complacent. The European nations are awakening, and we must keep on the alert. Unfortunately, our government has not succeeded in divorcing the subject of the tariff from politics, and until it does, there will be a spirit of unrest. European commodities are being imported in large quantities, and we are feeling the effects of foreign competition. By reason of the fact that our transcontinental freight rate from Pittsburgh to San Francisco is so much greater than the duty and the freight rate from the other side combined, Belgian, German and English structural material, and other iron and steel staples, are being landed on our Pacific Coast at a price with which Pittsburgh can not compete. This is only one of the special examples that might be cited. First and foremost, and above and beyond everything else, we are an industrial community. No higher wages are paid anywhere in the world than those paid in the Pittsburgh District, and the fostering of our industries means the welfare and success of our great institutions of learning. Both go hand in hand. I should be pardoned, therefore, in making a slight reference to our industrial conditions.

A recent investigation by the British Board of Trade shows that the average British workman, for an equal period of time, earns a dollar, the German workman earns 83 cents, the French workman 75 cents, the Belgian workman 63 cents, and the American workman earns $2.32. It can readily be seen that the high wages we pay lay us open to this competition, but with the present high cost of living, wages should not

be reduced. It is, therefore, necessary that we have a proper protective tariff.

I do not feel, however, that I should dwell longer on this subject at this time, but please remember that I have been in the manufacturing business in Pittsburgh for over thirty years, and a Councilman for only a few months. "The leopard cannot change his spots". The tariff is now up in Congress for settlement, but I desire simply to suggest that in your study of Political Economy, it might be well for those of your faculty, who "teach the young idea how to shoot", to familiarize themselves with the actual conditions, a full knowedge of which can be gotten from the industrial concerns of this district, so that they may teach from acquired practical knowledge, rather than by theory. There are a number of text books which teach free trade doctrine; and in a community such as this, where such doctrines can be conclusively shown to be based on false premises, such books should be expurgated or eliminated.

A friend of mine recently remarked that American brains, and our genius for inventing, designing, and constructing, would keep us in the front rank and would minimize foreign competition. But not so; brains are bought and sold. The man who invents, either sells his invention, licenses under it, or it is stolen from him; while he who designs or constructs, without protection by patent, is copied. American brains, in fact Pittsburgh brains, have erected modern manufacturing plants in far off China and India, not to speak of many European countries.

Now as to our City:

In July last the City of Dusseldorf started a municipal college or university in which municipal law, social questions, sanitation, health, charity, as well as the modern problems in the life of a city, are made subjects of study by lectures and otherwise.

It is stated that the teachers are authorities in their special branches, taken from men who have had practical experience in municipal administration. Dusseldorf has the reputation of being the model city of the world, and its new departure is of course calculated to train men who will be fitted specially for municipal work in German cities.

Now, while it is a well recognized fact that in our city governments we are not in this country anything like so far advanced as are the municipalities of Europe, a matter such as this should set us thinking. It will probably be a long time be-

fore we have special colleges of this kind, but there is no reason why training along these lines could not be taken up as an educational branch. Or the municipality could, in the interests of good government, well afford to found a chair on "Municipal Government and Affairs", where this special training could be given.

What we want in our American cities is honest, business government. Placed alongside those of European cities, we are most inefficient.

The greater number of our cities are the playthings of corrupt lawmakers, and the prey of special interests who rob the city treasury, and thereby increase the taxes of the property-owning citizens. The cities of the country are growing abnormally, at the expense of our country districts. This may be due to the fact that the small farm is out of fashion; or it is possible that the glamour of the city attracts. This great growth, increasing the taxable valuation as it does, means large collections from taxes, and other revenues, and there should, therefore, be all the more caution exercised in choosing men for office who shall administer the affairs of the municipality.

Some day there will be an awakening; and when it dawns upon the often well-to-do but careless American citizen that he should exercise his voting franchise, not only at the regular election, but also at the too often neglected primaries, so that he will cast his vote for decent government, a step forward will have been made. And when those in power stop the practice of coercing men on the city pay roll in the exercise of their franchise, so that every man may vote as his conscience and his judgment dictate, another very important step towards decency and efficiency will be the result.

The University, through its teachers, could do no better work than to teach its students the value of the voting franchise, and the necessity of exercising it. It should be the hope of all self-respecting citizens that the time will come when our American cities will be able to come up to the standard of our great universities, along the lines of decency and efficiency.

Toastmaster:

The usual custom is for the President of the Association to introduce the Toast-Master. This time the custom is reversed, and it is with very great pleasure that I introduce to this assembly, our new President of the Alumni

Association, who was only elected on Monday evening, too late to get his name on the program as president in time to put him on as the first speaker. The gentleman has not only been an active man in business—though he has not forged any iron chains, he has dug his success out of coal mines and made his name known as one of the builders of industrial Pittsburgh—he has also been one of the most earnest and ardent workers among the Alumni Association, and as Chairman of the Students' Employment Bureau, and a member of the Committee on Athletics, and in other of the activities. It is with great pleasure that I introduce Mr. Alfred R. Hamilton, President of the Alumni Association.

The Alumni and the University.

Alfred Reed Hamilton, '94, President General Alumni Association, University of Pittsburgh.

Mr. Toastmaster, Ladies and Gentlemen:

It is very evident from this cordial reception that most of you men have never heard me try to make a speech. Anniversary time is usually regarded as a good period in which to take stock. It is the custom at a season like this to sit down on the mile-stone for a breathing spell to look over the various aspects of our activities—to review our achievements, to make an inventory of our present-day resources, and plan and resolve for the future, before we gather ourselves for the journey ahead.

Now when we come to take a look around at the affairs of the University of Pittsburgh, from the standpoint of the organized Alumni, and consider the present Alumni Association's history, its present day functions, its needs and its opportunities, we find there isn't much in retrospect. Its history is a scant story soon told. With an institution one hundred and twenty-five years old, the present Alumni body is scarcely twenty years old. The contemporary membership embraces nearly all the pioneers. Now the reason for this is clear. In spite of all this eloquent hot air about the glories of our past, the fact is that for nearly a century of its existence, this institution wandered through a period of scholastic somnambulism which for depth and duration makes Rip Van Winkle's sleep look like the cat nap of old age in an easy chair.

It was Dr. Holland who first tried to induce us to get a move on. Landing among us as Chancellor, possessing high

scientific attainments, a broad general culture, a very large and very strong personal following, a big generous heart and tactful ways—and I may add, with a shrewd working knowledge of a certain type of boisterous, half-baked college boy who needed a curbed bit and set of toe-weights to get him going right—it seemed that Holland was just the man to lead the University on to bigger and better things. But scarcely had he mustered his magnificent energies to the task, when Andrew Carnegie came along and collared him, and the Doctor gathered up his wonderful collection of butterflies and other insects and moved into the palatial bughouse which Andrew had built for him across the way. With Holland's exit, the institution folded its hands and relapsed into its peaceful repose.

Then they tried to get "Pa" Brashear to take the position, but "Pa" was busy gathering material for a brick-laying job on the new observatory. He did, however, agree to fan the sleeper until they got someone else.

Suddenly, from an obscure point out West, and traveling at a rate beyond all known speed limits, the University was hit by a six-cylinder, ninety-horse-power, self-starting McCormick, and in that one smash the entire institution, from top to bottom, lost not only its desire but its capacity for sleep. From the shock of that collision the Faculty was re-organized, the course of study revised, the student body stimulated and enlarged, the Alumni identified, organized and set to work, the name and location changed, several buildings erected on the new site, and the thrill of something doing at the University was sent through the nervous system of the entire community. That's going some, isn't it?

I wish in the stingy three minutes allotted to me, that I had time to jam in something about this remarkable man,—this broad-shouldered, big-minded, wholesome, wonderfully able Scotch-American, who goes about equipped with seven-league boots, and a megaphone, always hurrying along to get some place, and always arriving there, don't forget that; and everlastingly proclaiming the University. And all this time with the blush of good health on his cheek and his big blue eyes glowing with generous enthusiasm—always beaming and always busy—he is lugging a burden in this construction work which would utterly crush an ordinary man. With so much to accomplish and so little money at hand to do it with, it is a wonder to me the man isn't driven to distraction.

I wish, just in order to round out things, that the aspiring author of "The Vision of She-Who-Knows" would have topped off the story of the completed work of this University by a little tableau of the Chancellor sitting at ease in his slippers by the fire, gently rocking to and fro and blowing up rings of smoke from a good cigar and saying to his wife, "Well, by Jiminy, that is one job that is out of the road at any rate".

Well, it was McCormick who really got this Alumni Association together. And once on the job, it found its field of effort clearly defined. In a word, it discovered that its function is to bind this institution to the community by thousands of living, compelling ties; to contribute something of counsel, effort and cash; to help build its buildings, to win it friends and increase its enrolment; to supervise its competitive athletics, to keep them clean and to teach the participants to strive with courage, to win with modesty and lose with good humor and good grace; and finally, and one of the most important things of all, to open the avenues of self-help to students who need help. This last phase of Alumni activity, under the guidance of the Student Employment Bureau, in itself is a problem so pressing in its necessities and so rich in its possibilities, as to justify specialized effort as a life work. You cannot conceive, unless you come into personal touch with this situation, the sacrifices some students are making to acquire an education—not scores of them, but literally hundreds. And although it is a complicated problem, I am glad to say that we are slowly getting the work on a systematic basis, and I believe that our records will show that we have made genuine progress.

Now, for all this work we need within our Alumni organization, more than anything else,—recruits. The present body is small but reasonably active. The efficiency of such an organization, of course, is measured by the accumulated efforts of the individuals who compose it; therefore, we should not rest until we have lassoed the last available man. We need the wealth, the capacities and energies represented among our Alumni on the outside, some of whom I fear are still paying toll on the Sixth Street Bridge. And it isn't such a hard thing to get recruits. The fellow who has touched the magic walls of this old institution will find the old memories tugging at his heart strings if we but stir them. They were written there at the most impressionable time of his career, in an atmosphere of laughter and song and good companionship and healthful sports and hard and helpful work. Set these chords vibrating

and the truth comes home to him, hot in its conviction, that this university belongs to him and he to it. Once establish this sense of personal relationship, coupled with personal responsibility, and we have found a willing and efficient helper.

The opportunity offered in this field of Alumni activity constitutes the very highest type of service. An opportunity to do a share towards equipping citizens for the republic to the end that the entire community, country and race may advance. It is an atmosphere vibrating with the loftiest kind of action. It is a field in which no task can be commonplace and no detail can be insignificant. It is a field in which we need every available man; and I say to you, men within the organization, that we owe this recruiting effort to the University, and we owe it to our brothers, who are still on the outside, that we try to prevail upon them to come in and enjoy with us the pleasure of this glorious and uplifting work.

Toastmaster:

After that address, we ought all to be ready to sing with enthusiasm the Alma Mater song.

(The University "Alma Mater" was then sung.)

Our own University, our very own today. We can but think upon this anniversary occasion of the long line that has preceded us, even though they may be referred to as having been somewhat sleepy in comparison with the insistent activities of today. But the noble traditions of the old college are not to be forgotten, nor the line of men who in the Faculty and as Alumni have painted their names high upon the country's page of honor. We have sent forth in these one hundred and twenty-five years, men to the Supreme Court of the United States, to the Senate and Congress, to the Supreme Courts and Legislatures of other states, men famous, men of great achievements in all walks of life. While the work was not as broad, as big as it is now becoming, it was of high class, and we need none of us be ashamed to look back upon the record of high achievements of the earlier part of the University's history. But we can, with all the more pleasure and pride, turn to its present achievement of widening usefulness and of greater things to come under such a leader as we now have. I shall not attempt after the eloquent words that have been uttered, to speak of his tireless energy, his wonderful leadership, his breadth of new energy with which he is pushing us for-

ward, but simply say that we are glad to hear now from our own "Sammy Mac".

Our Own University.

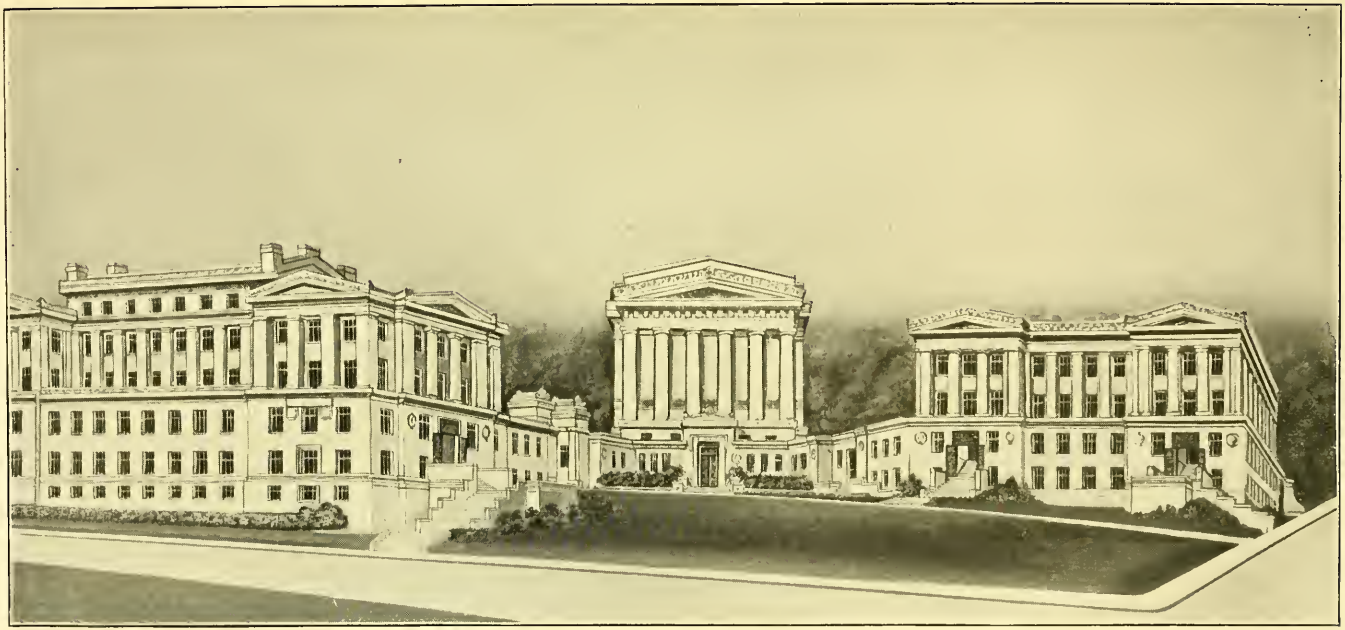
Samuel Black McCormick, Chancellor, University of Pittsburgh.

Mr. Toastmaster, Delegates of Institutions, Guests, Alumni, Students, Friends of the University, and Members of our Faculty and Trustees:

I really feel that I am at a very great disadvantage after the genuine eloquence to which we have just listened. If there is anything going on in this University that demands help in the form of service or in the form of money, Alfred Hamilton is sure to have a hand and a helpful hand in its doing. The fact that he is a genuine orator only came to our knowledge a year or two ago. I have no doubt that his fellow students in the 90's knew all about it, but while we knew the kind of man he was, the spirit that was in him, we did not know anything about that wonderful eloquence which he has poured out upon us tonight.

I should be much more comfortable this evening if I could call upon the guests for an address and myself remain silent. Here is Principal Peterson of McGill University, who was to have spoken this morning, and we did not give him the opportunity. Dr. Hollis has been in the room this evening until a moment ago, representing Harvard, down on the program for an address which he had no chance to deliver. We have scores and scores of other men representing the institutions of the country from the Atlantic to the Pacific, all of them ready to speak for the institutions which they represent. I wish that, having brought together such a vast number of men representing the educational interests of the entire nation, representing also measurably the educational interests of other nations as well, we could have the opportunity to listen to them rather than to myself. In this part of the anniversary occasion we are, however, enjoying the hospitality of the Alumni. This is their part of the celebration. It is, therefore, my part simply to do what I am told, and what I am told to do tonight is to speak a little upon our own University.

I have listened to the addresses of yesterday and today with a pleasure I cannot possibly express. It is a marvelous thing that not only should so many of our institutions be repre-



School of Engineering Building
(Thaw Hall.)

Proposed Administration Building

School of Mines Building
(State Hall.)

sented, but also that with a single exception the persons upon the program should all be at hand ready to do the part assigned to them. I want to take this opportunity, really the very first opportunity I have had, to thank the delegates who have come as our guests, to thank also the institutions which they represent for sending them here. I think that all of us will feel from this time on that we are bound more closely to the educational forces of America and of the world by reason of the fact that we have mingled together, discussing questions of universal educational interest. I hope that we have come more nearly to their solution than ever before. It is fitting, however, that at the close of this particular anniversary, so significant in the history of the University of Pittsburgh, we should for a moment give thought to ourselves; for after all, while the purpose of this gathering is to discuss educational problems of general interest, another purpose is to center the thought of our own community in upon ourselves, to give our people the opportunity to know what the University of Pittsburgh is, what it stands for, what it is trying to do, in order that it may if possible have a larger place in their mind and in their affections.

The University of Pittsburgh aims to represent the community in which it is located and to meet the needs and realize the ideals of the people it is destined to serve. It was planted in the metropolis of Western Pennsylvania primarily for the sake of the people of Western Pennsylvania, and the name given in 1819, "The Western University of Pennsylvania", indicated that it was to be the University of Pennsylvania, the Western one. We have in this part of the state a population numbering 3,100,000 persons. Dividing Pennsylvania into two commonwealths, we would have New York as one, Illinois as two, Ohio as three, Eastern Pennsylvania as four, Texas as five, Massachusetts as six, Missouri as seven, Western Pennsylvania as eight; so that the population which the University of Pittsburgh is under obligation to serve, stands eighth in size in these United States. This gives some conception of the work which the University must accomplish. This great population of 3,100,000 persons, 1,018,000 of whom are centered in this particular community, is, in spite of its great diversity in population, with representatives of practically every nationality under the sun, after all a most homogeneous people. The spirit, aspirations, ideals of this great population are identical throughout the whole region. An edu-

cational institution, therefore, which would serve the people, must belong to the people, must serve their needs, meet their aspirations and fulfill their ideals. The University of Pittsburgh, then, aspires not to become a Harvard, a Princeton, or a Yale, nor even a Columbia, a Pennsylvania, or a Chicago; but it aspires to become such a University as will understand the needs of its people and endeavor not alone to satisfy those needs, but to help the people to realize the very highest possible aspirations and ideals. This is my first thought with reference to the University of Pittsburgh. We shall attain unto real success just in the measure in which we are able to realize this conception in the development of the University of Pittsburgh.

I wish to say, further, that in this thing we are attempting to study what education actually is, in its essence and in its development. Yesterday we discussed the Ideals of Education most wisely and most effectively. I wish more people than were actually present could have heard the papers. We discussed also the field of the City University, for a university situated in the midst of a great city has certain peculiar problems which it must attempt to solve. This question was also most wisely and most effectively discussed by the men who read the several thoughts.

Now our thought with reference to the University of Pittsburgh is this: The people have their problems, and it is the business of the University to help to solve them; problems of citizenship and of service; problems of education and efficiency; problems of economics and of sociology; problems of industry, and of capacity; problems of health; problems of morals and religion; problems of engineering; problems touching whatever engages the thought, affects the welfare and enters into the lives of the people. This is the function of the University of Pittsburgh. Only as it seeks to touch the life of the people in the place where they live and where they work, where they think and where they hope, is it possible for any institution of learning such as this, actually to accomplish its mission. We believe that the University of Pittsburgh has in this great industrial community, a mission peculiarly important,—a mission which includes, of course, the education of youth for citizenship and for the several professions and employments in which they must engage; but which also includes a service of co-operation with the community in the solution of all the problems, intellectual and practical, which in any large

measure affect the lives of the people. We believe, moreover, that the University can do this without in any measure lowering the very highest ideal of education. We do not believe that education has value only in the degree in which it is useless and cannot be applied to a practical purpose. We do not believe in a culture which is too fine to be put to doing the work of the world. We do not believe that learning is degraded when it is put to the service of mankind, when it is made to help people live their lives more wisely and beneficently. Here in Western Pennsylvania, in the midst of a great people, with the ideals and problems which are ours, the University of Pittsburgh will be true to its mission only as it touches the industrial, the professional, the individual life of the people in just as many points as it is capable of doing.

Another thing. I am glad that the addresses of the evening have brought so many helpful ideas and suggestions. I want to refer just a moment to one thought which was so beautifully and eloquently presented by President Hibben, namely, loyalty. How beautiful a thing loyalty is, and how defective the life which is without it! Loyalty to the highest conception of life; loyalty to duty; loyalty to the community; loyalty to the home; loyalty to the church; loyalty to all the interests which belong to us as citizens of the community. The relation of an alumnus to his University is quite like that of a son to his parents. He may be a good son or an ungrateful son; but whatever he is, he cannot take out of himself the life, love, care, devotion of his father and mother. Likewise an alumnus of a University, whatever he may be, cannot take out of himself what his University put into him. What he is he owes in large part to it. Loyalty to it, therefore, is not a matter of choice nor even of duty. It is a part of the life. Its absence would imply a vital defect. Next, therefore, to the loyalty a man feels for the mother who bore him, is the loyalty that the alumnus feels for the institution from which he has graduated. Standing as we do on this anniversary day, in the midst of this great community, surrounded by four thousand loyal alumni, we confidently expect the fulfilment of all our plans and hopes for the University of Pittsburgh through the loyal, devoted service of the sons and daughters whose intellectual life has been communicated to them by this institution of learning. Their enthusiasm, communicating itself to the community, itself loyal to the University, will mean development, growth, power beyond all our present ability to prophecy. We need

not doubt, on this one hundred and twenty-fifth anniversary, that our fondest dreams will become realities, and that all the hopes of the men who wrought long ago, and all the desires and expectations of those who are with us today, will by and by be brought to pass in a University worthy of this great community and capable of serving all the needs of all the people.

One more thought about the community of interest on the part of our higher institutions of learning. Listening to the addresses, especially this afternoon, I was very greatly encouraged with the thought that all these institutions of learning are one great body united in sympathy and in purpose. What one has belongs to all. In our part of the Commonwealth we must get all the power and benefit possible out of the realization of this fact. State College in the center of the State; Waynesburg, and Washington and Jefferson; Thiel, and Geneva; Westminster, and Grove City, and Allegheny in the western part of the State; Pennsylvania College for Women, Duquesne University, the Carnegie Technical Schools, and the University of Pittsburgh in Allegheny County; these are standing together; each helping the other; each doing its share of the work; each helping to solve the problems of education; all working together to give the people the best inspirations and the highest efficiency; is it not reasonable to expect that in no great while our community, with its three millions of people, will be as well known for its institutions of learning as it is today for its industrial, its banking, and its other commercial interests. It encourages us mightily to remember, too, that in these hopes and plans, these longings and expectations, we shall have the sympathetic interest and the real co-operation of all the institutions of learning in our land.

Again I wish to thank those who have come to us from abroad for their presence with us yesterday and today. I hope that as many of you as possible will stay for the perhaps more practical discussions of tomorrow. I wish to assure you of our grateful appreciation of your presence, and of the courtesy of your institutions in making you their representatives on this occasion which means so much to the University of Pittsburgh.

Toastmaster:

A very graceful suggestion has been made by a citizen of Pittsburgh, one of our guests of the evening. I shall ask him to present it.

Mr. Elmer K. Hiles:

I notice in the songs that we are singing this evening, as they are printed, the very frequent recurrence of one name, and I think we should take the opportunity to express the appreciation which we all feel of the man, an alumnus of this grand old University, who has so much added to the enjoyment of this happy occasion, and whose poetical genius is so very well reflected in his songs. I propose a toast to the young man who in his work tonight illustrates the friendship, the loyalty and in his chosen vocation the highest type of social service—George M. P. Baird.

Chancellor McCormick:

May I add just a single word which I overlooked? In my mail yesterday I received the following. I do not know its authorship, but I trust that the unknown author will share in this toast which has just been proposed.

To Pitt:—Our wish, our hope, our prayer—
Long life, Prosperity and Fame
Undying. May thy name
Be known and honored everywhere
That it may come. And may thy sons
Love thee and cherish as their guiding light
So long as life its weary journey runs,
And following thy leading, keep the right.
One hundred five and twenty years
Have passed since first thy kindling light
Shone forth so clear and bright;
Undimmed by carping doubts and fears.
Long hast thou lived, and living, grown
Greater and stronger as the years rolled by.
Bright through the years a glowing vision shone
Of Pitt to be exalted and on high.
And now, today, with joy we see
The vision of thy youth made real;
Thy labors and thy zeal
Have opened wide the way to thee
That leads to fame, and shows thee this—
A hillside crowned with Attic symmetry—
The New World's great Acropolis—
The light of generations yet to be.

For here, upon thy classic slope,
The temples of the Arts are seen;
And Science too, serene,
Upheld forever by the hope
Of what may yet be done and learned
To make this earth a still far better world.
For this the wise of all times yearned,
And yearning, bold their banners wide unfurled
Against their foes—Distrust and Doubt
And Ignorance, the worst of all.
They lived to see its fall;
Their other foes, too, put to rout.
Today, fair Science rules supreme,
And teaches clearly what is right and true,
And brings to light the student's dream,
So far as our mere human hands can do.

Within their shrines the Arts are found,
Far reaching, with their wondrous power
They fill each flying hour
With charm and beauty that abound.
The Graces Three their servants are,
Charming from toil their devotees away,
And guiding onward like a gleaming star
They change the darkest night to brighest day.

O Pitt: Our wish, our hope, our prayer—
Long life, Prosperity and Fame
Undying. May thy name
Be known and honored everywhere
That it may come. And may thy sons
Love thee and cherish as their guiding light
So long as life its weary journey runs,
And following thy leading, keep the right.

I trust this will be included in the cheer that you give to Mr. Baird.

The audience rose and gave three cheers for Mr. Baird and the author of the poem.

THURSDAY, FEBRUARY 29th.

9:30 A. M. CONFERENCE OF THE COLLEGE PRESIDENTS OF PENNSYLVANIA.

Ethelbert Dudley Warfield, President Lafayette College, Presiding.

After the reading of the minutes of the last meeting, President Warfield appointed a nominating committee consisting of Provost Smith, of the University of Pennsylvania, President Rendall, of Lincoln University, and President Benze, of Thiel College, to present their report at the close of the meeting. As a committee to consider the time and place of the next meeting President Warfield appointed President Apple, of Franklin and Marshall College, President Sharpless, of Haverford College, and President Haas of Muhlenberg College. Invitations were received from Pennsylvania State College and Lafayette College, to hold the fall meeting of the Association at State College or at Easton.

President Warfield then introduced the speakers, whose addresses follow:

Scientific Grading of College Students.

Raymond William Sies, Professor of School Administration, University of Pittsburgh.

Mr. Chairman:

President William T. Foster of Reed College in his recent book, "The Administration of the College Curriculum," opens an important chapter bearing upon the subject treated in this paper with the following paragraph:—

"College honors are everywhere awarded on the naive assumption that grades in college courses are distributed on a scientific basis. For many important administrative purposes we assume that an A in one course is equivalent to an A in another course; that the 80 per cent of one instructor indicates an achievement equal to the 80 per cent of another instructor. Accordingly we estimate the fitness of candidates for admission, determine eligibility for athletics, assign annually hundreds of thousands of dollars in scholarships and fellowships, award Commencement honors, elect men to Phi Beta Kappa, and confer degrees wholly or in large part on the evidence secured by merely counting the number of A's, the number of

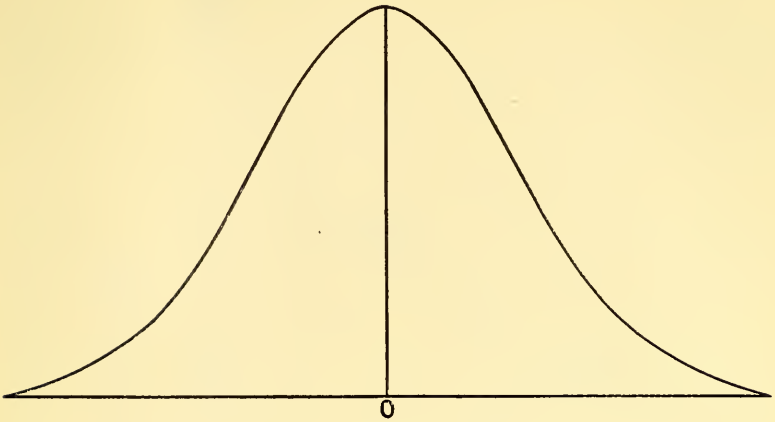
B's, and so forth, that each student has to his credit. The question is pertinent to what extent our assumption of the equivalency of grades is warranted by the facts."*

If the answer to this question propounded by President Foster is, as he intimates in his opening statement, that our assumption is without foundation, the further question immediately suggests itself whether anything can be done to bring a degree of order out of the relatively chaotic condition of affairs described. The present paper has to do with the problems raised by these questions.

Fundamental to the entire discussion are the scientific principles in accordance with which mental abilities or achievements are actually distributed among college students. It is a matter of common experience that human beings, even those of the same sex and approximate age, vary greatly among themselves. The variation is far greater in mental than in physical traits. Men differ much more widely in intellect and temperament than in height, chest capacity, or cephalic index. The same variation prevails among plant and animal species and in general throughout nature. This variation, however, does not represent so much chaos and confusion in nature (inclusive of man); it does not represent an unpredictable and unmanageable phenomenon which the scientist recognizes as merely a source of constant disturbance and irritation. For the most part the facts are quite the contrary. In fact, the variations in question are controlled in a large measure by natural law, and the scientist has equipped himself with the principles involved.

It has been found by many tests that physical traits of animals and men of a given species tend to be distributed in accordance with the distribution of a recurrent variable quantity resulting from the chance action in different combinations of a very great number of equal independent causes, each just as likely to occur in any given case as not. The ordinary graphic representation of such a distribution, known as a normal distribution, is the normal probability curve. In figure 1 we have an illustration of this curve. The abscissas represent the different magnitudes of the variable, and the ordinates the frequency of occurrence of these magnitudes. It will be noted that the magnitudes cluster closely about a mean or norm and that on each side of this central tendency, indicated

* Op. cit., pp. 250-251.



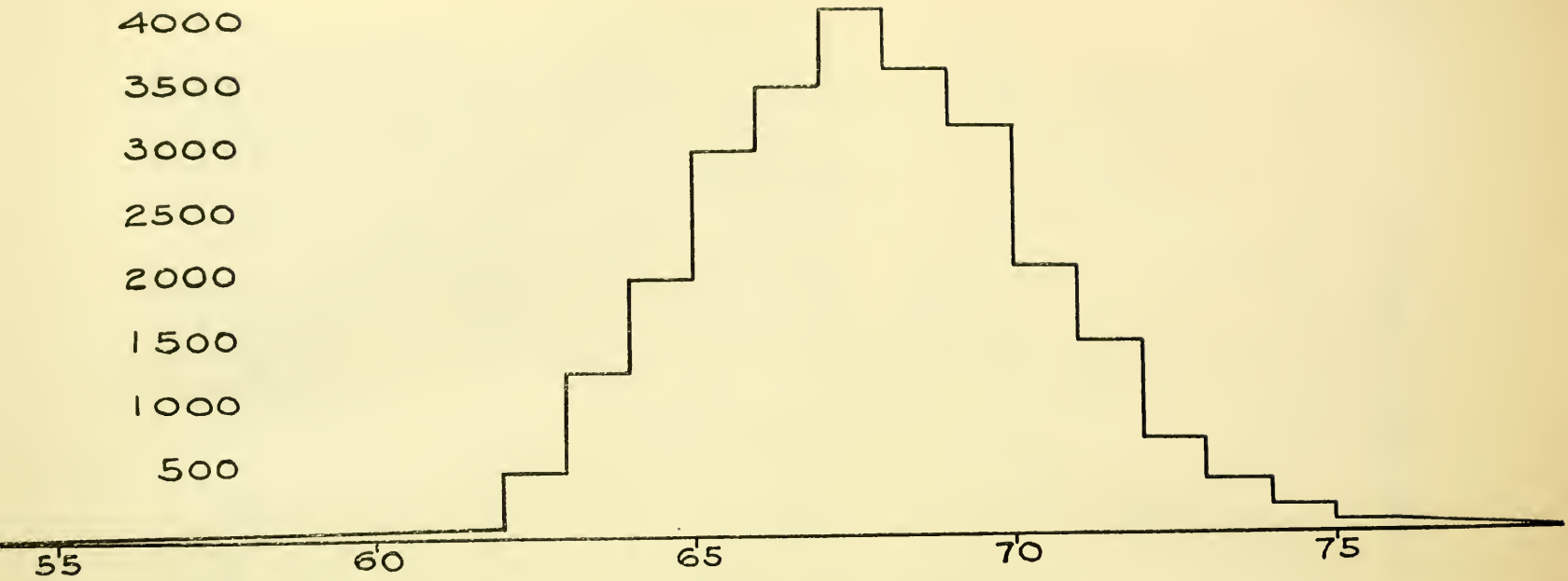
$y = ce^{-x^2}$

Fig. 1

by the apex of the curve, the frequencies gradually decrease to zero. The relation between height and width varies in different curves, some are taller and some flatter than the one before us; but they all belong to the same species and are governed by the same mathematical equation. This equation in its simplest form is given in the figure. The area between the curve and the zero abscissa is known as the probability integral. The perfectly smooth and regular curve would appear only if the causes were infinite in number. Consequently, the actual curves that investigators have secured have been only approximations to the mathematical forms. Figure 2 presents a curve giving the distribution of the heights in inches of 25,878 recruits in the United States army, as an example of the distribution of physical traits. It is taken from one of Pearson's works. * The abscissas represent heights, the ordinates represent frequency of heights. Such a curve is technically known as a curve of frequency, and the area between it and the zero abscissa as a surface of frequency. The approximation of the curve and surface in question to the normal probability curve and the probability integral is apparent.

There is much evidence that mental traits tend to be distributed in the same way. In the first place modern physiological psychology teaches that mental traits have a physical

*Vide *The Chances of Death,* by Karl Pearson, Vol. I., pp. 276-277.



Height of 25878 Recruits

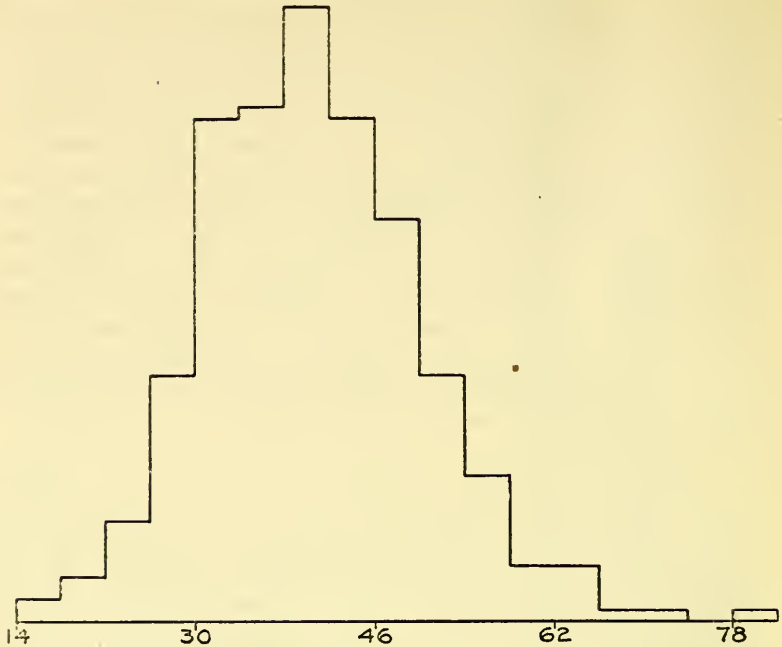
Fig. 2

basis in physical traits of the nervous system, and are correlated with them. There is no good reason to believe that variation in the nervous system is essentially different from variation in the muscular or other system. It would be anomalous if the parts and elements of the nervous system were distributed in accordance with a law different from the one governing the distribution of other physical traits. Granting then that variation in the nervous system is normal, we may argue on psychophysical grounds that the distribution of mental traits tends to be of the normal type. We may reasonably assume that mental traits follow the same law of variation as the corresponding physical traits. Furthermore, mental phenomena are natural phenomena, and their character as such is presumptive evidence of considerable weight in favor of the position here taken.

Statistical evidence in favor of the tendency of mental traits to be distributed in the manner under consideration is not so plentiful nor so definite on the whole as that concerning physical traits, owing, the scientist believes, to the difficulty of adequately measuring most mental traits with our present facilities. However, such evidence is by no means entirely absent. Some specific mental traits can be measured with a fair degree of accuracy, and measurements of such traits in groups of properly selected individuals have been made and the distributions worked out. When conducted by proper methods these investigations have definitely shown that the particular traits in question tend to be normally distributed. In figure 3 is presented the distribution of a relatively simple mental trait in 312 boys twelve years old. The trait in question is efficiency in perceiving A's on a page of capital letters appearing in indiscriminate order. This distribution is one of a number of the same class given by Dr. Thorndike. *

It is proper to add that it is an exceptionally good illustration of approximation to the normal distribution in the field of mental measurements, especially in view of the relatively small number of cases. However, the weight of evidence from tests of mental traits susceptible of fairly accurate measurement is very strongly in favor of the proposition that such traits are approximately normally distributed. In general, results leading to a different conclusion may be charged to de-

*Vide *Introduction to the Theory of Mental and Social Measurements,* by E. L. Thorndike, pp. 46, 49, 83.



Efficiency in Perception of 312 Boys

Fig. 3

fective methods, such as the mixing of types and the testing of selected groups. Causes affecting the form of distribution other than the natural forces of variation must obviously be eliminated. The individuals tested must correspond in age or maturity and in the degree of training previously received in the trait tested. They must also represent a random selection. Obviously the distribution of a mental trait in a group of geniuses or a group of idiots would not be normal.

The preceding considerations, with others that might be advanced, constitute, in the minds of scientific men, sufficient evidence to warrant the assumption that mental traits not yet susceptible of fairly accurate measurement tend to be distributed in the form represented by the probability curve. Experience thus far warrants the belief with some confidence that when the technique of quantitative methods in the mental and social sciences is sufficiently developed the distribution of such traits will be found to be not materially different in

form from that of the traits we have been considering in the preceding pages. In this same connection Thorndike writes as follows:

"Distributions approximating it [the probability integral] do occur very commonly in mental traits of original nature. And one will probably never be far misled by supposing that, in respect to the amount of original endowments in any trait, individuals of the same sex, race and age are distributed approximately according to the probability surface. The evidence from measurements points toward such approximation. Moreover, what is known of the physical basis of intellect and character leads to the expectation that many somewhat nearly equal factors are at work to determine the amount of any instinct or capacity possessed by men." *

We now come directly to the matter of distribution of the ability or achievements of college students in college classes, which constitutes one of the complex mental traits which we have no satisfactory means of measuring at the present time. Is this ability or type of achievement normally distributed? The grounds for assuming approximation to the normal distribution are just as strong in this case as in the case of other mental traits not susceptible of fairly exact measurement. Yet in the actual grading of college students by college teachers practically all conceivable forms of distribution are manifested. Approximation to the normal distribution is the exception. This diversity, of course, is due very largely to the absence of definite units and the inadequacy of measurement, but it is probably due more largely to the widely varying personal factor in the teachers. Each teacher has his own particular views and habits in grading. When, however, instead of the grades of individual teachers we distribute collectively the grades of a large number of teachers in different subjects, the influence of the personal factor is practically eliminated, since the peculiarities in the grading of one teacher are neutralized by those of another. Such a distribution may therefore be expected to exhibit a very rough approximation to the normal.

In figure 4, on page 178, are exhibited about 12,000 general averages of students in the University of Wisconsin in re-

*Vide *School and University Grades, by Walter F. Dearborn, Bulletin of the University of Wisconsin, High School Series,* No. 9, pp. 43, 44, 46.

cent years.* These averages were computed from the grades of a large number of teachers. The figure exhibits a distinctly imperfect, but yet quite recognizable, approximation to the probability integral. The relatively large divergence therefrom may fairly be charged very largely to the present unavoidable imperfections of the scale or scales wherewith ability of achievement in the classroom must be measured. President Foster in the book cited at the beginning has presented a study of nearly 12,000 different annual grades in many different subjects secured by students in Harvard College during the years 1903-4 and 1904-5. † The distribution of these grades on a scale with five divisions is similar in form to that of the general averages of the Wisconsin students.

How widely the grading of individual teachers diverges from the standard form may be judged from table I for which Professor Max Meyer of the University of Missouri is responsible. This table shows the distribution of the four grades, A, B, C, and F, in use at the University of Missouri, by forty individual teachers in that institution during a period of five years preceding 1908. For the most part the grades were given for courses in the College of Arts and Science, and therefore to a large extent the different teachers had the same students. To avoid undue publicity the teachers are designated by subjects. On the basis of the grades assigned the students graded by each teacher were divided into three groups designated superior, medium, and inferior. The first group comprised the twenty-five per cent of students ranking highest, the last group the twenty-five per cent ranking lowest, and the middle group the remaining fifty per cent ranking between the other groups. The last column indicates the total number of students graded by each teacher. The distribution

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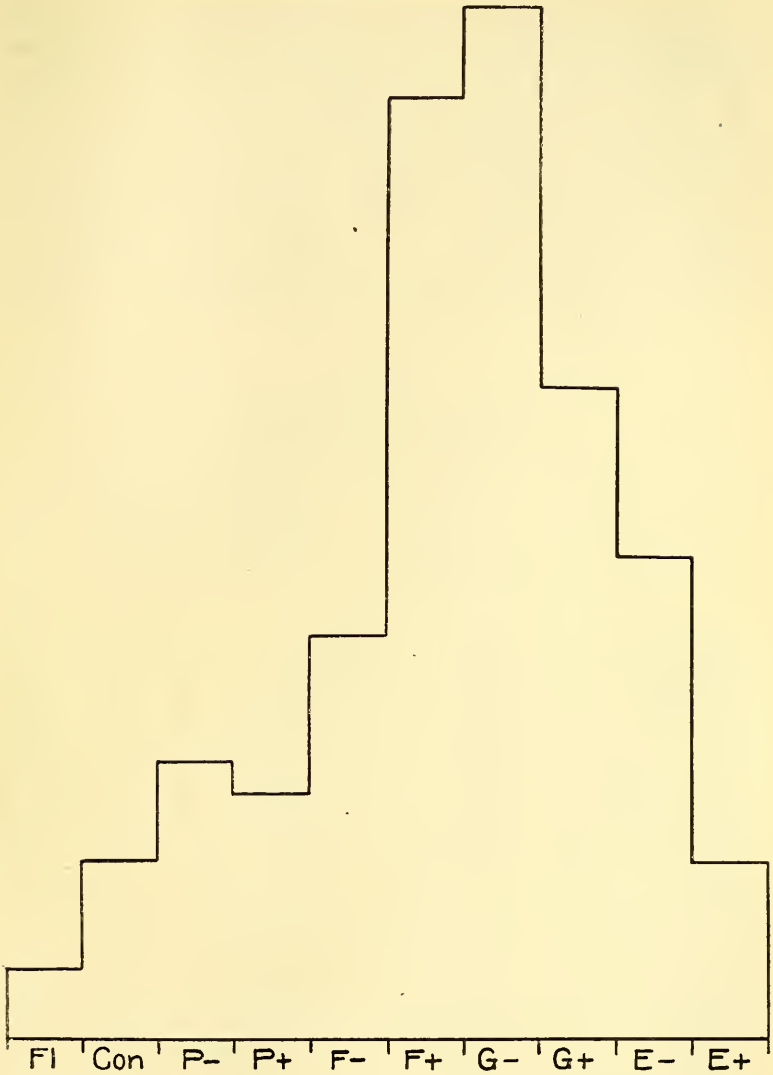
**Educational Psychology*, by E. L. Thorndike, 2nd Ed., pp. 165-166.

†*Vide Administration of the College Curriculum*, by W. T. Foster, pp. 251 ff., 276 ff.



Grades of 12000 Students
University of Wisconsin

Fig. 4

of grades is indicated by the percentages of the total number of students receiving the different grades in the several groups. The teachers are listed in the order of their liberality of grading. Thus the first teacher assigned the grade A not only to all his superior students, but to considerably more than half of his medium students as well. He also assigned the grade B to more than half his inferior students, and few were failed. The last teacher, on the other hand, assigned the grade A to only one per cent of all his students, and over one half of his superior students received the grade C. All his

Table I

Grading of Students at the University of Missouri.

Teachers	25 Per Cet Superior Students			50 Per Cent Medium Students				25 Per Cent Inferior Students			Total Number of Students
	A	B	C	A	B	C	F	B	C	F	
Philosophy	25			30	20			13	10	2	623
Latin, I.	25			27	23			19	6		130
Sociology	25			27	23			7	13	5	958
Mathematics, I.	25			15	31	4			12	13	208
Economics	25			14	36			1	19	5	461
Greek	25			14	26	10			14	11	287
Latin, II.	25			11	39			1	19	5	577
French	25			11	29	10			15	10	295
Political Science	25			9	30	11			16	9	592
Mathematics, II.	25			7	29	14			9	15	145
German, I.	25			5	39	6			14	11	586
Psychology, I.	25			5	36	9			15	10	907
German. II.	25			1	38	11			14	11	941
Elocution	20	5			50			6	19		917
Geology	22	3			45	5			17	8	293
History, I.	14	11			42	8			19	6	779
Zoology, I.	21	4			41	9			19	6	479
Psychology, II.	19	6			41	9			20	5	238
History of Art	25				40	10			20	5	685
Bacteriology	20	5			40	10			21	4	263
Freehand Drawing	18	7			40	10			15	10	506
Chemistry, I.	23	2			38	12			19	6	205
English, I.	21	4			37	13			17	8	964
Astronomy	13	12			37	13			20	5	225
History, II.	11	14			37	13			20	5	806
Zoology, II.	24	1			36	14			17	8	250
German, III.	22	3			34	16			12	13	441
Chemistry, II.	9	16			32	18			25		21
Education	18	7			31	19			16	9	266
Mathematics, III.	19	6			30	20			6	19	182
Mathematics, IV.	25				29	21			15	10	380
Physiology	20	5			28	22			18	7	426
	19	6			28	22			14	11	544
Mathematics, V.	16	9			25	25			10	15	209
Engineering, I..	13	12			24	26			16	9	813
Mechanical Drawing.	18	7			22	28			13	12	558
Mechanics	18	7			19	31			11	14	495
Engineering, II.	16	9			17	33			13	12	826
English, II.	9	16			12	35	3			25	1098
Chemistry, III.	1	11	13			47	3			25	1903

inferior students were failed and some of his medium students. The table shows all degrees of leniency and severity between these extremes. By reference to the last column we find that every teacher almost without exception had a sufficient number of students during the five years to warrant the belief that the distribution of actual ability or achievement in his classes was approximately normal. * The chaos and gross injustice of such grading are evident and require no comment.

It should be understood that there is nothing strange or peculiar about the state of affairs here described which formerly existed in the University of Missouri. It is simply typical of the situation at practically all colleges and universities throughout the country. The natural remedy for this condition of things with its confusion and injustice is plainly the normal or scientific distribution of students' grades which requires teachers to dispense grades according to the natural distribution of ability or achievement. A few progressive institutions, as indicated below, have recently begun breaking the way toward better things by the adoption of this device. Among these the university just mentioned must be given the leading place.

There are some persons without doubt to whom the preceding considerations will not appear convincing. Despite the above argument of numbers they will be inclined to insist that the striking and well-nigh universal differences in the distribution of grades by different teachers are to be explained primarily by the fact that some teachers and some subjects consistently draw a better grade of students than others. In considering this objection it is necessary to distinguish carefully between required and elective courses. In the first place, if the objection is sound, if variations among teachers in the distribution of grades are primarily due to differences in the quality of the students, we should expect a degree of uniformity in the distribution of the grades assigned by different teachers of required courses. This relative uniformity, however, does not seem to exist. Our experience does not bear out the assumption that it exists, and investigators have not recorded any observed differences, so far as the writer is aware, between the discrepancies among teachers in grading

*Vide *The grading of students*, by Max Meyer, Science, n. s., Vol. 28, pp. 243 ff.

students in required courses and those in grading students taking elective courses.

Again, if the objection under consideration is sound, we should expect that teachers of elective courses who habitually grade higher than the average teacher, do really have superior students, and that those who habitually grade correspondingly low really have inferior students. The facts, however, so far as they have been definitely ascertained, are rather the reverse. In table II are presented the results of an investigation made by Dean Ferry of Williams College upon this specific problem. The administration of the curriculum at Williams College is more than ordinarily favorable for the prosecution of such a study. In the freshman and sophomore years the studies are either prescribed or elective within narrow limits. In the junior and senior years there is practically free election. Dean Ferry computed the average standings secured during their freshman and sophomore years by the several students enrolled in all the junior and senior elective courses of the college offered during the years 1906-7, 1907-8, and 1908-9. On the basis of these earlier records he improvised a measure or index of the quality of students in the several junior and senior courses. On the basis of the quality of students thus

Table II

Quality of Grading and of Students at Williams College.

Teachers	Quality of Grading	Quality of Students	Teachers	Quality of Grading	Quality of Student
1	120	− 7	16	41	2
2	114	−30	17	41	9
3	95	−17	18	40	−14
4	89	−22	19	34	15
5	89	− 6	20	32	7
6	73	−40	21	27	77
7	66	−33	22	23	39
8	63	5	23	20	13
9	59	− 8	24	6	− 2
10	58	6	25	3	24
11	56	− 1	26	0	113
12	52	−21	27	0	113
13	50	17	28	−11	− 4
14	49	20	29	−21	39
15	42	1	30	−23	41

determined he further improvised a measure or index of the quality or standard of grading of each of the thirty teachers giving junior and senior elective courses. The latter measure was so formulated that a high index indicates liberality in grading and a low index indicates corresponding severity. Time and space do not permit here an explanation of the derivation of these indexes. It must suffice for the present to say that the writer has satisfied himself that, though not mathematically exact, the indexes are fairly reliable. Those desiring a detailed account are referred to Dean Ferry's report for 1910-11, in which the investigation is described. * Table II is copied from this report with changes in the order of arrangement. The data for the different teachers are here arranged in the order of the quality of grading. The indexes for teachers who were most liberal in grading head the columns, those for the teachers most severe in grading close the table. It will be observed that, whereas the indexes in column two regularly decrease, the corresponding indexes in column three irregularly increase. This means that on the whole the teachers who graded highest had the poorest students and those who graded lowest had the best students. The correlation between standard of grading and quality of students is distinctly negative. By various methods of calculation the coefficient of correlation has a high negative value. What is the explanation of these facts? The chief explanation is not far to seek. The negative correlation between quality of grading and quality of students results very largely from the well-known proclivity of inferior and indolent students to seek snap courses and the tendency of able and earnest students to seek the more substantial courses. A snap course may be defined as one where for a given effort or achievement a relatively high grade may be gained, owing to low standards of qualitative or quantitative requirements, or both. To undertake to demonstrate here that such courses are studiously sought by some students and avoided to some extent by others would be a clear case of carrying coals to Newcastle. Finally in this connection it may be said that Dean Ferry's results and the conclusions therefrom are reinforced by results secured by President Foster from a study of the undergraduate history of the 4,311 men who graduated from Harvard

*Vide *Williams College Bulletin*, Series 8, No. 5 (June, 1911), pp. 27-32.

College during the years 1886 to 1900 inclusive. President Foster divided the members of each class into two groups, those graduating with distinction and those graduating without distinction. He found that for every class under the system of free election then in vogue at Harvard, the latter group had taken a greater proportion of their work in snap courses than the former. In the case of most of the classes the difference in question between the groups was definite and marked. * The correlation between quality of grading and quality of students as the latter was ascertained is obviously positive in the case of President Foster's investigation. However, this may be due entirely to the fact that the quality of the students was necessarily determined by their standings in elective courses rather than in required courses as at Williams College. Doubtless many students gained distinction by selecting snap courses, while others lost that honor by selecting heavy courses. Had the quality of the students been determined on the basis of the work in required courses, the correlation might have easily been negative in this case also. That negative correlation, or even absence of correlation, between the quality of grading and the quality of the students of college teachers is sterling evidence of the need of scientific grading in colleges and universities goes without saying.

The need for a scientific distribution of the grades of college students having been presented, our next question is whether such a thing is feasible, mathematically and practically. If, as we have assumed, the abilities or achievements of college students are distributed in the form of the probability surface, there can be no question regarding the mathematical feasibility of the undertaking. All that is necessary is to scale off equal distances for the different grades to be given on the zero abscissa between the extremes of the curve and to compute the percentage of the surface included between the ordinates at the end of each division. These percentages will be identical for all curves having the same number of divisions on the abscissa and may be readily calculated by use of tables. These specifications having been fixed and the computations made, each teacher simply arranges his students in order of merit and assigns the different grades to approximately the

*Vide *Administration of the College Curriculum*, by W. T. Foster, pp. 217 ff. 302-303.

proper percentages in order. A plan of grading of the type just described which has frequently been recommended for adoption by men interested in scientific grading is shown in figure 5. The five divisions on the abscissa are all approximately equal, save that the middle one corresponding to the grade C is somewhat longer in order that the middle group of students may comprise exactly, fifty per cent of the entire number. In accordance with this scheme teachers assign the grade A to the three per cent of their students ranking high-

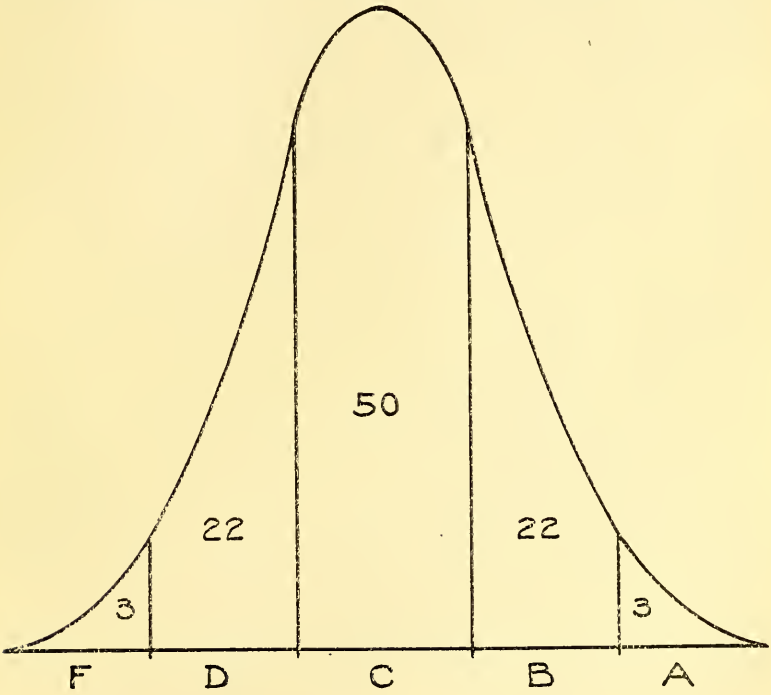


Fig. 5

est in the same class or subject, the grade F to the three per cent ranking lowest therein, the grades B and D to the twenty-two per cent ranking next highest and lowest, respectively, and the grade C to those in the middle group of fifty per cent. Teachers with small classes do not necessarily follow the scheme each term or year, but rather in a cumulative way through a series of terms of years. The one criticism the writer has to offer here upon this plan is that three per cent seems too

small a percentage of failures to properly motivate a considerable class of students well known to college teachers. The scale, however, could readily be adjusted to meet this objection. It may be suggested further that where there is no desire to indicate different degrees of failure the length of the portion of the scale representing failure may without violence be fixed somewhat arbitrarily without reference to the remainder. Doubtless the form of the curve in figure 5 should be slightly modified to take account of the selective influence of the college, but since nothing definite is known regarding the amount of this influence it is commonly disregarded.

We may be assisted in attempting to answer the question of the practicality of a scientific or normal distribution of students' grades by a brief description of a system that has been in operation at the University of Missouri since 1908. The system in question was introduced by action of the faculty, and its administration is in charge of a special committee of the faculty. It is definitely based upon the assumption that the distribution of ability or achievement in college classes is approximately normal. Every teacher is expected to rank the students in his classes in order of merit and then to assign the grades E and S (excellent and superior) to the twenty-five per cent ranking highest, the grades I and F (inferior and failure) to the twenty-five per cent ranking lowest, and the grade M (medium), to the remaining fifty per cent between. At present the distribution of the grades E and S and I and F among the groups of students ranking highest and lowest respectively is left to the individual teachers. The committee on grading after the close of each semester publishes a statistical table showing the character of the grading of each teacher for the semester and since the inauguration of the present system. This table is circulated among the faculty. Teachers whose grading deviates markedly from the standards established are called to account by the committee and asked to justify their failure to conform. The grading of teachers of small classes is expected to conform to the standards only when taken through a series of semesters or years. This new system has very largely eliminated the diversity of practice in grading at Missouri, which is shown in table I. After a test of more than two years the system was declared to be fairly successful by Professor Meyer and to be becoming more fully so. * A simi-

*Vide *Experiences with the grading system of the University of Missouri*, by Max Meyer, Science, n. s. Vol. 33,pp. 661 ff.

lar but less elaborate system was introduced at the University of Iowa in 1910. Still another similar system is being introduced at Reed College during the present academic year. Other institutions will not be slow to follow. Given a faculty on the whole really desirous of improvement and with conditions carefully controlled, as at the University of Missouri, and there is no good reason why the distribution of students' grades on scientific principles should not be practically feasible. The great difficulty is to overcome the inertia of past custom and individual freedom. The actual distribution of the grades according to the new plan is easy. The gain in accuracy, standardization, and justice are worth the effort involved in a change to the new system many times over.

Let it not be imagined, however, that the scientific distribution of grades will eliminate all the difficulties and discrepancies encountered in the adminstration of the grading of college students. The introduction of such a plan of grading in any institution must be considered a big stride forward, but after its adoption there will still remain possibilities of improvement in the field under consideration. Thus the wide variations among small college classes in quantitative standards of requirements and accomplishment will not be very greatly affected by the new plan. It is not too much to say that some college teachers now require three and four times the amount of a student's time and energy to earn a given amount of credit toward graduation that some other teachers in the same institution demand or accept. Snap courses and the opposite variety do abound, and the latter are just as unjust and just as conflicting with correct standards as the former. This is a sad state of affairs for academic standards, but something besides correct distribution of grades is needed to adequately remedy it. The requirement that a teacher giving a snap course or the opposite distribute his grades in the form of the probability integral will of itself by no means raise or lower the standards to a proper level, though without doubt it will ordinarily contribute something to that end. Obviously the new distribution of grades could be made mechanically with no change whatever in the work of the students. Fear of failure is not the only factor contributing to the maintenance of class standards. The nature and amount of the teacher's assignments and his efficiency in the classroom

as a teacher are two additional factors of equal and greater importance respectively. However, despite the relative incapacity of the scientific distribution of grades to standardize amount of work in college classes, such distribution does render the grading in the variant courses under consideration distinctly more accurate and just, or rather, less inaccurate and unjust. This comes about from the fact that in general teachers of snap courses are required to lower their grades and teachers of the opposite type of courses are correspondingly required to raise their grades, which is all well and good so far as it goes.

An extended discussion of other means and methods of quantitatively standardizing requirements and achievement in college courses might be undertaken here, but such a discussion would carry us far beyond the limits of the present subject. The problem of such standardization is both important and extremely difficult. The solution involves first of all full recognition by teachers of the desirability of greater uniformity in quantitative standards and concerted faculty action toward that end. This goes without saying. Another effective factor in the solution of this and other college problems would be competent supervision of college teaching. It is realized that the mere suggestion of such a thing will be considered heresy by many, but no one familiar both with college teaching and with the effects of skilful supervision of teaching in elementary and secondary schools can doubt the potential efficacy of supervision in the college. Supervision of instruction is distinct from administration. The college administrator is found everywhere, but the supervisor nowhere. One of the important duties of a supervisor of college teaching would certainly be the standardization of requirements and accomplishment among the different classes.

Another very important advance in the grading of students which the normal distribution of grades can in no way bring about is what is known as credit for quality. This is a device gradually coming into favor for graduating the amount of credit received in a course according to the quality of work done as well as by the number of hours per week the class is in session. There is a very wide difference between the actual achievement of a student who secures the required number of credits for graduation with an average grade of D+ or C— and that of the student who gains the same number of credits

with an average grade of A—, let us say. It is probably not too much to say on the basis of the usual values of these grades that the actual achievement of the latter in the thing the college stands for is at least twice that of the former; yet both receive the same degree and the same diploma. A student who is obliged to leave at the end of his junior year with an average grade of B+ or A— to his credit is certainly as much entitled to his degree on the score of actual attainment as the one who finishes in the regular way with an average grade somewhere below C. From these considerations both the justice and the standardizing value of credit for quality are manifest. In addition it has a distinct educational value corrective of unfortunate habits in many students in that it places a premium on thoroughness and penalizes superficiality.

The plan of credit for quality seems to have been first proposed by President Hyde of Bowdoin College, in a magazine article ten years ago. * It was seriously advocated by Professor Cattell of Columbia University in another article a few years later. † In 1904 the plan was put into operation at the University of North Dakota, but it was abandoned in most respects about six years later. The scheme was adopted in 1905 at Columbia College, where it has since been in operation. In 1908 credit for quality was introduced at the University of Missouri in connection with the plan for the distribution of grades in the form of the probability curve. It is now being introduced at Reed College. The schemes at these different institutions are essentially alike. They provide that students doing superior work in a course shall receive more than the normal amount of credit toward graduation and, what is equally important, that those doing inferior work shall receive less than the normal amount of credit. Thus at Missouri where the five grades E, S, M, I, and F are now given, as already explained, the grade E carries thirty per cent additional credit the grade S, fifteen per cent additional credit, M carries the normal cretit, I twenty per cent less than the normal, while F signifies no credit. The other schemes differ in various details from the one here described.

There can be no doubt that under certain right conditions credit for quality is an extremely valuable feature in the grading of college students. In fact, it is an essential factor in

*Vide *Outlook*, Vol. 71, pp. 886-889.
†Vide *Pop. Sci. Mo.*, Vol. 66, pp. 375-378.

thoroughly scientific grading. Though the correct scale of credit for quality has not been determined, the experience of the future may be trusted to yield an approximation to it. The right conditions referred to are the scientific distribution of grades and the quantitative standardization of requirements, so far as possible. The first of these is far the more important. Without scientific distribution of grades credit for quality is apt to produce very disastrous effects by greatly multiplying the evils of snap courses. Not only are high grades awarded for relatively inferior or little work, but these unearned grades are weighted with additional credit. Students are given two strong motives instead of one for taking such courses, and teachers seeking popularity and large classes are doubly tempted to bait the students. If the negative correlation between the quality of the students and the quality of grading of teachers offering elective courses which was found to prevail at Williams College is a general phenomenon throughout the country, the general introduction of credit for quality without the safeguard of scientific distribution of grades would be nothing short of an educational calamity. Required distribution of grades in the form of the probability curve, however, by confining within proper limits the proportion of each grade awarded, would not only render credit for quality safe, but would also render it highly effective in accomplishing the results desired from it. The scheme of credit for quality in operation for a number of years at the University of North Dakota was abandoned because of precisely the evils we have been considering.* It is distinctly in point to add that at this institution the scheme was not safeguarded by a correct distribution of grades. At the University of Missouri and Reed College credit for quality is properly safeguarded in this manner. The scientific distribution of grades, however, does not eliminate snap courses, as has been indicated. Low standards are not necessarily changed by it. Snap courses retain some of their power to work ill in connection with a scheme of credit for quality in spite of normal distribution of grades. A few moments of reflection will make this clear. Therefore a maximum of uniformity in class standards, correct of course, is another condition which should be realized as a basis of credit for quality, as well as for other good and sufficient reasons.

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*Cf. *Administration of the College Curriculum*, by W. T. Foster, p. 247.

Scientific distribution of grades, standardization of requirements, and credit for quality, all have more or less important bearings upon the troublesome problem of properly restricting the number of hours of work which students are permitted to carry. If left to themselves a large proportion of students would register for course after course almost without limit. This tendency under present conditions seems to require some artificial check. It is recognized that without some such limitation under our present clumsy systems of testing and grading achievements in college classes, many students by skilfully choosing courses and complying only with the minimum requirements in courses selected could easily fulfil the formal requirements for graduation in a scandalously short time. Hence by use of the device under consideration we legislate in effect that students must remain in college the usual time whether they employ the additional time to good advantage or not. Some students thus required to remain in college longer than they otherwise would do improve the extra time sufficiently to warrant the delay in completing the requirements; others do not. Another object in establishing the limitation in question which is much more sound fundamentally than that just considered is to shield the thoughtless and overconfident students from superficiality and failure. On the whole arbitrary limitations of the number of hours of work stuents may carry has been far from a satisfactory solution of the problem raised above. The significance of the problem in this connection arises from the fact that the various features of scientific grading named at the beginning of this paragraph would contribute very definitely to its solution. Obviously the stiffening of snap courses and the award of credit according to quality together would tend to regulate automatically the number of hours elected by students. Further, they would be a fair guarantee that all degrees would be really earned. These statements should be self-evident. In the degree to which scientific grading could be perfected the need of artificial limitations of the amount of work carried by students would disappear.

And now very briefly in conclusion let us connect the special problems considered in these pages with the larger problem of which they are only a part. Somewhat radical innovations in methods and system of grading college students have been suggested, but certainly in a spirit of helpfulness

rather than of captious criticism. It is believed that nothing has been proposed which can not, should not, and will not in due time be carried out. The movement is now definitely under way in progressive institutions. It is but one aspect of the growing response to the widespread demands of the present day for some definiteness in educational standards in the interest altogether of increased efficiency and economy in the education of our children and youth and in the service of society through education. These are the great objective points. We have frequently heard and read of late that the American college is under fire. So are other educational institutions and systems. The special reference in these pages to the grading of students in college does not mean that the college alone is in need of a better system of grading. The same remarks are also applicable to this phase of educational administration in secondary schools, normal schools, the university in general, and elsewhere. It is confidently believed that improvement in grading is one of the important lines along which future progress in educational standardization will occur.

The Articulation of the High School and the College.

Isaac C. Ketler, President, Grove City College.

Mr. Chairman:

Last July at the meeting of the National Educational Association, the Department of Secondary Education appointed a committee on the Articulation of the High School and College. I notice the committee is made up of very excellent men. Charles H. Judd, Professor of Education in the University of Chicago, eventually wrote the report of that committee. This report was published and was sent around to all college men, I am sure, in Pennsylvania. Dr. Schaeffer, our State Superintendent, it seems was very much interested in the proposition made by the Department of Secondary Education, and expressed the wish that the colleges of the state would take up this whole subject, and as far as possible adjust the requirements for entrance to colleges to the proposition made by this committee. At our last meeting I probably foolishly asked that a committee of seven be appointed to take up this question. I say foolishly, because after I did that I was

made chairman of the committee. I have been exceedingly busy with my own work, but I took up this report and sent copies of it to all the college presidents. I also wrote a letter to each one, asking for a personal opinion on the subject, and then on the basis of this report of the Department of Secondary Education and on the basis also of these letters which I received from the college presidents of the state, I made up a tentative report and sent a copy of this tentative report to the seven members of the committee. Last night we had it over at the Hotel Schenley, and this report was so dreadfully shattered in the committee that I feel that it would be better not to bring it up today. As a report I am going to offer a few propositions for consideration today, some simple propositions upon which we all may agree, and just go as far in the matter as we feel that we are able to go today. I hope for future light and a better understanding of the whole question.

I want to say, Mr. Chairman, that I believe the time has passed when we can say to the mountain, "Come to Mahomet." The high school is a great institution in Pennsylvania, and we are obliged to recognize it. Furthermore, I think it would be a mistake for the college professors to take a high and lordly position with reference to the high schools; and I hope the time will come when we can have an articulation of the high school and the college upon a basis that will be fairly acceptable to both sides of the equation.

Dr. Sieplein, our Professor of Chemistry, has really done all the clerical work in making up the report, and I think it is only fair to him that I let him present these several propositions which we now undertake to offer to this body. If we can agree upon a few things, it will be progress, I think, in the right direction, and in the direction of some sort of articulation between the high schools of the state and the colleges. I would suggest that we take up these propositions which Dr. Sieplein will present, singly, and consider each one before we get mixed up on the whole problem. I will call upon Dr. Sieplein to take up these propositions.

The Articulation of the High School and the College.

Otto Julius Sieplein, Professor of Chemistry, Grove City College.

Mr. Chairman:

The first proposition is one based upon the proposition in Department B of the Educational Association paper, that a unit as considered by the colleges should be one-fourth of a year's work done in a secondary school; not as it has been defined frequently, one study taken daily for a year by the high school student. This definition of a study taken daily for a year by the high school student, has acted to a certain extent and is acting to bring about a requiring of five or possibly six subjects from the high school student, crowding a student and making him do superficial work in each of the several subjects. It is found by the Educational Association and by many others, that four subjects a day is all the ordinary high school student can well do, and therefore, based upon the recommendation of the Educational Association, the practice of our colleges, and the recommendation of the college presidents, I would make that recommendation that the definition of a unit be adopted as one-fourth of the year's work by a secondary school. If a student do five subjects in a year, it is but four units of credit on the year's work.

The second proposition is that the total requirement be fifteen units. That is again the recommendation of the Educational Association.

The third proposition is that English taken through the four years of the high school course be granted three units. That is again the recommendation of the Educational Association, and the practice of many colleges and the recommendation of many of the college presidents from whom we received communications.

The fourth proposition is to require from all students these three units in English and two and one-half units in mathematics, the choice of the mathematics from algebra and geometry recommended to be left to the individual institution.

In addition to these requirements from the students who are intending to follow the classical courses, four units of foreign languages. To require of students intending to follow the scientific work, three units of foreign languages and one

unit of science. The other five and one-half units, making nine and one-half units, to be determined by the conditions under which each high school must work.

The fifth recommendation is that, instead of the recommendation of the Educational Association of vocational work up to four units, we allow vocational work not more than two units, and the character of the vocational work be estimated absolutely by the college to which it is presented.

These are briefly the five propositions that we have to make: First, that a unit be one-fourth of a year's work; second, that fifteen units be the total requirement; third, that three units of English be granted on four years of high school work, this grading of the English being a very common practice and being just, because the high school largely takes up studies of grammar and elementary English to such an extent that there is but three units of advanced work. Fourth, that we require two and one-half units of mathematics, this being required of all students; that we require of students entering for classical work, four units of foreign languages; for students entering for scientific work, three units of foreign languages, and one unit of science, thus making nine and one-half units of required work out of the total of fifteen; the other five and one-half units to be determined by the conditions governing the high school and by the conditions governing the college. Fifth, that not more than two of these five and one-half units shall be allowed for vocational work.

There are two or three suggestions I wish to make, based on the correspondence that we have had with college presidents. One suggestion, that algebra and geometry should not be taught in the high school unless the high school can offer four years of mathematics; and second, that the science taught in the high school be restricted to physiology, chemistry with laboratory, physics with laboratory, botany, zoology. If botany with laboratory and zoology with laboratory, to grant one unit; if without laboratory, to grant one-half unit. I think these are the only suggestions that we can readily offer based on the discussion yesterday on the tentative proposition.

On the Merit of the Recommendation from the Point of View of a Complete High School Course.

George Leslie Omwake, Vice President, Ursinus College.

Mr. Chairman, Ladies and Gentlemen:

The educationist has been insisting for some time that our work be based upon well-determined facts instead of mere opinions. The exercise to which we all listened with a great deal of interest this morning is a very good specimen of what the educationists are insisting upon, that we do our thinking upon such data as exist in fact and not merely in the opinions of the people. I think that the ambition represented in this idea is to be encouraged, but I am very skeptical myself as to whether we shall ever reach the point in education where we can proceed, at any rate to a very large extent, upon that basis. This is one of those subjects which, like religion and politics, cannot be bound strictly to scientific principle, and we shall have to go on making opinions as well as facts the basis upon which we proceed.

When we hold opinions, it is very easy for us to run into prejudice, and on educational questions, on political and religious questions, a great many of the positions which have been taken by men and classes of men have been based upon prejudice. What we want today as we approach this whole subject, is to liberate ourselves as far as possible from prejudice and be charitable at least in our opinions.

The questions which are involved in this report of the National Educational Association propose two distinct things for the High School. The first is in the larger field of possibilities with reference to the curriculum than has been had heretofore, the larger field of studies. The second is that among these studies we include a new class of work which has come into high schools in many places in recent years, namely, vocational work. Now with reference to these problems I think it is well for us to pause and think a little.

The ambition of our race has from very early time crystallized into two distinct aims. The one is represented in the word "being" and the other represented in the word "doing." In order to achieve the first, a high state of being, we have established from early times special agencies and institutions in which we have consciously set to work to

develop the inherent powers of our nature. These institutions are schools. The school has always been understood in the history of education as a place for the development of the inner powers, those which are subsumed under the head of "soul," including the intellectual and affectional nature. Of course, most of the effort has centered in developing our intellectual nature, but from the earliest times down to the present a school has been thought of as a place for the development of culture and for the realization of our being.

Side by side with the schools we have had from very early times another species of institution. It is represented by the tradesman's guild, for example, of medieval times, in which the youths were trained to do the work of the world through a system of apprenticeship. As the industries became differentiated, it was customary to recruit the various trades by systems of apprenticeship in which the young learned to do the work of the world under the instruction or guidance of experienced workmen. And coming down through the centuries, we have had always the system of apprenticeship in industry.

Now, at the beginning of the twentieth century, we are asked to enlarge our conception of education, and to include under the idea school organization which shall take in not only the old culture studies, but these things which heretofore have been carried on outside of the schools, under the auspices of the various trades themselves. As I understand it, the high school proposes to do for the mechanic arts what the university has already done to a large degree for the sciences which underlie the mechanic arts. We have heard a great deal in the last few days, and particularly in the address of Dr. Comstock, on the relation of the university to the community, and then again last night in the address of the Chancellor, of the wonderfully diversified way in which our universities are taking up all kinds of problems that affect the living of the people, their comfort and their welfare.

Now, just as the universities are taking up such problems through their various departments of research, furnishing the scientific basis on which the world's work may be done, as I understand it, the high school proposes to furnish the workers to do the work. The system of trades appears to be undergoing a change. There is not nearly so much apprenticeship as there used to be, and there is a sort of belief on the

part of the public that our educational institutions shall take up what is thus being laid down by the mechanic trades. So there is the demand on the part of the public that the high school shall include as part of its work, training in various forms of industrial art, and that this training shall have direct reference to the efficiency of the graduate, and be directed with a view of increasing his ability as a bread-winner when he goes out of school into the world.

Now, education has always been viewed as essentially a broadening process, and only those exercises have been admitted as legitimate disciplines, which have had a liberalizing effect. The most liberalizing study is the study which has absolutely no utilitarian significance whatever. That which broadens a man most is the study which he the least of all needs for his specific work or function in the world. The physician who would be a broad man includes in his reading a study of a variety of subjects outside of his professional literature. The same is true with the lawyer or the minister, or any other specialized individual. I think we all agree, or should agree, that education in its essential nature, is a liberalizing process.

Training, on the other hand, is a narrowing process. The intention of training is concentration, the aim is to bring the individual's powers to the point where he can *do* something skilfully. In order to do that he must shut out other things; he must concentrate. The tendency, therefore, in training is narrowing instead of broadening. And I think this distinction should be kept clearly in mind as we take up the whole question of training in relation to education.

Now there are none of us here who are willing to supplant education by training. If we can enrich it by introducing training, we are all ready for it. I think we should look with a great deal of concern, indeed with disfavor, upon the effort made to introduce training in the grades, where it takes the place of disciplinary study. If it in any way crowds out or interferes with the liberalizing process, it should be forbidden, for, despite the dictum of this report that it is not true that the broadening process should take place before the training process begins, it is nevertheless true that the training process should not be introduced so early that it interferes with the broadening process. There are things being done today in Pennsylvania in the name of education, which are

a crime. There are institutions for training sometimes bearing the name of "colleges" in which the avowed purpose is to fit young men and young women for practical purposes in life, which send their emissaries out over the country to gather up boys and girls who are yet in the grammar school, interfering with their education and crippling them for life as desirable members of society, in order that they may be trained to do some practical thing. We should protest against the too early introduction of training, for if we introduce it too early it is bound to interfere with the broadening process, with education itself.

At just what point training may be introduced to good advantage, is an open question. It is altogether possible that a considerable amount of vocational training might be introduced into the high school and be carried along in connection with the disciplinary studies to the advantage of the student, and that training to a certain degree in the later years of education serves to enrich the real work of the school. My own attitude toward the whole question is that of the man from Missouri. I am waiting to see what vocational training is going to be and do. I think that the seriousness with which it is taken up, the quality and character of the work that is undertaken, will have to be relied upon in making up our estimate of what we are going to do about it in relation to the public school course.

I think that, in view of the rapidly increasing complexity of our society, we must grant the high school more liberty of choice with reference to studies. As for the introduction of vocational training, I do not feel myself prepared to offer any suggestions. There are certainly persons in this room who know better what vocational training stands for and whose opinion would be worth a great deal more than mine. And having said this much, I leave the discussion to others.

Merits of the Report as a Basis for Admission to College.

Isaac Sharpless, President, Haverford College.

Mr. Chairman:

This report of the National Educational Association reaches a point where it is a rather revolutionary report. I

sympathize to a very large extent with the object of this report. I feel that the high school should represent the demand of the public, and that the colleges in so far as they can consistently with their own function, should coöperate with the high schools and come into close relation with them. Now, when I go into a meeting of high school people, I am apt to hear some rather unpleasant remarks about the domination of the colleges, and when I go into a meeting of the colleges I hear the same general remarks about the high schools. We shall never get satisfactory results until we come together to discuss this matter in a sympathetic spirit, and not in a spirit of criticism and attack.

I shall have to leave for home in a few minutes, and I will simply take some of these matters in detail. I agree with the report of the committee that fifteen units is quite enough for admission to college. In certain respects I would rather have it fourteen units. I agree with them also, in the definition of a unit. With respect to the report of the high school people, that every liberal course should include at least three units of English, one unit of social science, one unit of natural science, I do not believe we ought to have very much division of opinion. That the requirement of mathematics and foreign languages should not exceed two units of mathematics and two units of languages other than English, I rather think we may question; that is, that the minimum requirement of mathematics should be only two units and the minimum requirement of any foreign language should be only two units. And in a supplementary report a little further along they decide that even these minimum requirements should be reduced to nothing in every case for certain students; that is, that colleges should admit them to their freshman classes without any foreign language, or that they should admit them to their freshman classes without any mathematics. Here I think we come up against a rather important proposition. I am opposed to this reduction of the work either in mathematics or foreign languages. It seems to me the high school age of boys and girls is pre-eminently the age when foreign languages should be studied, and I doubt very much whether if a student enters college at the age of the average college student, without any foreign language, he is ever going to be a first-rate scholar in the sense that college standards demand. I believe I am not willing to go to the extent of vot-

ing for the resolution which the committee proposed, of four units in language only for classical students and three for scientific students. I do not think the college would adopt such a standard, and therefore I would hesitate to vote for it as a general proposition. It seems to me that for a classical course we need probably six units of language, and that the best of scholarship will demand something of that kind. For the scientific course we might reduce it to four, possibly to three. I would not have so much opposition to that part of the proposition, but the need of foreign languages in all departments of college work not merely for the language themselves, not merely as a basis of classical work, but as a basis of scientific work, is so great that the colleges that are going to maintain a high scholarly standard will have to demand a considerable amount of foreign language in preparation for college, because it will not be gained so readily or effectively after college is entered, even though beginning courses in all the languages are given in colleges. I approve of these beginning courses in certain of these languages, and I think we ought to do more than we are to accommodate ourselves to this demand; but for us to go seriously on record as approving any very serious reduction of the standard of admission in languages in college, it seems to me is a rather unfortunate thing to do.

I do not deny the fact which the high school people press with so much eloquence, that these boys who come up without foreign languages and who make up their mind in the last year of the high school course that they want to go to college, should have some place to go. I think their demand is quite right, and I believe there ought to be colleges and courses into which they could be admitted, but it does not follow that every college and every course should meet those requirements. We might just as well complain of a grocery store because it does not sell boots, and the people want boots, as to insist that every college should adapt its courses to every local condition, and that all boys, exceptional as well as normal boys and girls, should find a place where they can go to any college at any time when it suits them to go. It seems to me that is pushing it too far. I believe the colleges have something of their duty to uphold the literary standard of education in college, and I doubt very much whether we can accede to all the wishes of the high school in this matter. And

this not only with regard to the question of the amount of foreign languages required for admission, but in the number of vocational subjects. I do not know exactly what vocational subjects are, nor how valuable they would be as a matter of admission to college. If they can be so taught as to increase real discipline and training for the student's mind as well as preparation for life work, if they can be something which will be continued after the students get into college, so that there will be a certain continuity in the student's education, I think we might accept a certain amount of vocational subjects as a matter of admission to college.

I agree with President Omwake, that there should be considerable Latin as a preliminary in the way of educative subjects in college. But most of the scientific teachers seem to care very little about high school preparation in science. They would as soon take a boy without any knowledge at all as with the preliminary knowledge he usually receives. In the college the language teachers seem to be more and more insistent all the time that there should be definite and accurate preparation in language studies for the kind of work that is going on, and to have the idea that the right way for a college man to be educated is to begin with the languages, and carry on scientific work afterward. If such scientific work leads directly on to vocational training, well and good. It does not hurt him for that purpose. But if it simply means what it says here, "Household Science," and some other things of that kind, commercial work, and so forth, there ought to be schools that would take up this household science and commercial work and mechanic art and carry them along to a legitimate result. It seems to me as degrading the college course to a certain extent, that all colleges of art and general science should make these things a condition to admission.

I should be glad to hear the rest of this discussion, but so far as I feel at the present time, I should not be willing to vote for any serious reduction in the amount of foreign languages required, nor should I be willing to accede to the demand of the high school people that there should be four units of vocational work for admission to colleges which have only a very definite object in view to maintain the standard of scholarship—real, sound scholarship—in the country.

Following the reading of President Sharpless' paper, the Chairman opened the meeting for discussion.

William Henry Crawford, President, Allegheny College:

I shall be glad to say one or two things. The charge has been made over and over again that the colleges do not recognize as they ought the high schools and the high school work. To my thinking, in a sense we have been recognizing the high schools altogether too much. I know that is true in Western Pennsylvania. We have accepted credit from high schools whose credit did not at all deserve recognition in good colleges. We have here in this part of the state high schools that are essentially three year schools, and yet they have on the surface a four year course. It seems to me we stultify ourselves as colleges, when we accept units from such high schools as these. In all high schools of that class, it seems to me there should be an examination on the part of the colleges for the work done. If they are able to satisfy the requirements on what is practically a three year course, I should give them the opportunity of coming up for examination just as we would allow any one to come up whether he had ever been in a high school or not. We should give them the opportunity of passing the entrance requirements.

On the other hand, it seems to me we have not recognized enough the better class of high schools. We have discriminated against the high schools which have been doing work of fine quality, and which have maintained standards of which they may be proud. We have discriminated against them by accepting credit from the high schools which are clearly of the second class. It seems to me we ought to pause at this point to consider whether we are not lowering ourselves in discriminating against the ranks of the better class of high schools, by failing to make a distinction between high schools. Personally, I very much wish that our State Board of Education would take hold of this matter, and tell us very clearly just what high schools ought to be counted as high schools of the first class, to which we might give credit and give face value for their work, whether on the basis of the unit as here defined, or on the basis of the unit as prescribed by the Carnegie Foundation.

In regard to the matter of what studies shall be credited in college and what shall not, it seems to me we have

reached the time when we shall be quite safe in accepting credit for a larger variety of subjects than we have heretofore. I am not yet converted to the idea that we ought to give very much credit for vocational work in the high schools, unless we are very sure as to the character of the work done. But I do think that we ought to be very careful with a student coming from high school to us, to see to it that we do not mix the matter of college work and high school work. The college course ought to stand one hundred and twenty hours, or however we may count it, done in college, and I think we ought to have every student who comes to us clearly understand that that which he gets in college is another matter. When I say that, I do not mean to say that there is not just as good teaching in some of the high schools as in the colleges—perhaps better teaching. I should grant even that as a basis of argument.

But that is not the matter. When the boy gets out of the high school he enters into candidacy for a man, and in the years between seventeen and twenty-one grows from the boy into the man. It seems to me the standard in the four years in college, as nowhere else, is manhood. It is powerful intellectual manhood that he is growing to, and we ought to have that boy understand, not that he is grown to a man between June and September, but that if he was a boy in the high school, he was treated as a boy, but when he enters college we are looking at him not simply as a freshman, but as the man he is to be four years hence, and for that reason we are treating him as a man. He ought to understand that he is coming into a world where the requirements are more severe, where it means business; for he is looking not simply at the work of a four years' course, but he is, possibly, looking also to a professional course or advanced study toward a Master's degree and a Doctor's degree in the university, and he ought to do an entirely different kind of work.

Now, I may say, in reference to this matter, that it was only a few years ago, comparatively, that in the college with which I am associated our Professor of German, a new man, said, "I cannot accept the credits that are offered in German as a substitute for college work"; and he refused utterly to accept a one year credit in the language. He said, "I have no use for it in my courses," and furthermore, "I am not willing to admit that I cannot do as much in one year with freshmen as

can be done in two years in the average high school or academy." He put this matter to the test. We had at that time a preparatory school connected with the college, and tried to secure pretty good teachers for the work. This professor said, "I am willing to put my students who have one year's work in college right alongside of the students who come out of the academy with two years' work, and I will show that I can do better work; that my students that have been with me one year will be able to take up second year German and do the work better than those who come from the average high school or from our academy." And I may say that this professor has made good. The same thing is done now in our Romance Department. It is not that the teaching in college is better than in the high school, but that we are dealing with an altogether different personality in the freshman class from that with which they are dealing in the high school. It seems to me that this should be taken into account.

I am quite in sympathy with the process of standardization which seems to be going on. I wish we might have more of it instead of less of it; but I feel that when we talk about standardization we should regard simply minimum requirements. We ought not to go beyond that. I should hope that after fixing our minimum requirements, and making them as high as we dare, there would still be left room enough for one or two or three colleges in this state, noted not in Pennsylvania alone, but all over the country, for the high character of the work they do in Greek and Latin. I could wish that we might have one or two or three colleges in this state, noted not only here in Pennsylvania, but throughout the country, for the character of the work done in history and economics, with perhaps some political science and sociology connected with it, and so do specialized work in that line. I wish we had two or three colleges in this state requiring three years in Greek for admission instead of two. I wish we might have institutions which would make specific requirements, advanced requirements, for the subjects of which those institutions are making a specialty. So that my thought would be in the matter of standardization, that we ought to look toward a minimum. But it should be a well-defined minimum, one which can be legally enforced either by the State Department at Harrisburg, or by the members of this Association, or in some other way. Yet at the same time

there should be room for the growth of the individual college in its own definite and specific line; to satisfy, of course, all the minimum requirements, but at the same time make a different and peculiar contribution to the work of higher education.

I may say with reference to the suggestions made by the committee, that on the matter of the unit, if it can be very clearly defined (and I have already hinted at what I have in mind), if it can be clearly understood what this year's work in the high school is going to be, then I am willing to say that one-fourth of the year's work should constitute a unit. I should want to be very sure about the definition before I voted for the proposition which has been presented this morning. I would personally vote for fifteen units, and vote for the three units of English. I would dissent from the three units of language for scientific courses. It seems to me we ought to hold to at least four units, for the reason that the tendency is, after getting into college into the scienticfic courses, to eliminate language altogether. Unless the student has his preparation in language before he enters college, there is no opportunity after that. I do feel, however, that even in the classical work, the literary courses, we are going to be driven to accept a minimum requirement of four units, because of conditions. But while we are compelled to do this, I am in favor of requiring an additional hour's work in language work in college.

To illustrate what I mean: in the high school at Akron, Ohio, they have some twelve hundred students, possibly more. This is the language requirement in that school, and it is recognized as one of the best high schools in the state of Ohio. A student there is given the choice between four years ot Latin and four years of German. He may take whichever he chooses, but he cannot take two years of Latin and two years of German. He must take either four years of Latin or four years of German. The only exception made to this is in the case of about thirty students who are preparing for technical schools, who are allowed to take two years of Latin and two years of French.

When we consider such a high school as that in Akron, with the character of the work they do, where no student is allowed to graduate from the high school without having four years in foreign languages, either German or Lat-

in, I do feel that we have reached the point when for our literary courses we must accept the four years' minimum. However, I am not yet in favor of going to a lower minimum than that.

Ethelbert Dudley Warfield, President, Lafayette College.

Mr. President, there is a point of view which I think we must all keep in mind, and that is that not only have we to articulate the college and the high school, but we have to articulate the college and the university. There has been some heart-burning in the State of Pennsylvania over a report recently issued from the Department of Education in the United States, which undertook to classify the colleges in this state with reference to those whose students are completing a requirement for the Master of Arts degree within one year after receiving the degree of Bachelor of Arts. And there were only four institutions in the State of Pennsylvania that were classified, according to that report, in the first class. I have no heart-burnings, as Lafayette College got into the first class, but I feel that there is a little injustice to some of my brethren. Yet I want to point out for your benefit today, the thing that must always be kept in mind, and that is the thing that lies behind this discussion. We must not forget, in our discussions, that we have to consider the boys and girls quite as much as we have to consider the colleges and the high schools. We have to consider not only the boys and girls; we have to consider those able and vigorous teachers and principals who are trying to build up good high schools, despite the political opposition to a real and thorough training of their community.

Are the colleges about to abdicate their position of leadership in educational work in this country, and allow a lot of people who simply want to run things smoothly in their communities, and have big high schools—to allow them the right to send their boys and girls to our institutions, and certify whether they are fitted to do college work or not? Now, the whole question before us today is to set such a standard for our work that we shall be quite sure that we are not deceiving the boy who, having gone through a school that has our approval, comes to us; that we are not deceiving him by the admission that he is fitted to do college work when he is not fitted to do college work. What we want is not more students in our

colleges; what we want is not to make it so easy that any one who wants to go to college can go, whether he is fitted for college or not. But when we get men there we will get men that will do something else than root for the football team, and go to college dances. We want men who have minds that can be trained to work, and who have taken life seriously. Then scholarship counts for something, and scholarship is a state of mind and not a state of body.

I want it very distinctly understood that when I come to vote on these things in detail, I feel that I am not dealing honestly with the situation. This report does not represent progress. It has no element of progress in it. It has an element of decadence along the lines of scholarship. I am not in favor of three years of any foreign language. I am not in favor of two years of mathematics. I want those things that make mental stamina. I want four years of mathematics, one-fourth of the course for every year in the high school. I want Latin in the high school, because it is a thing we can build on; because it not only makes for training of brain, but the making of character. Certainly, we do not know what we are talking about when we say vocational training. Why is it more vocational to teach a girl to sew than it is to teach her to do mathematics? Why is it more vocational for a girl that is going to be a teacher in Wellesley or Vassar or Smith, to know how to do embroidery than it is for her to be able to read Latin? Why is it more vocational for a boy to be able to drive a nail than to be able to conjugate a Latin verb, if he is preparing to be a lawyer? Why is it more vocational to train his hand than to train his tongue? Why is it that boys in the high schools today do not care about an ability to express themselves in good, clear forcible English, rather than to make for themselves a book-rack? I have no sympathy with this point of view. I believe it is a great thing to train the body, but I do not see any more reason to accept for a classical course in college the ability to do certain kinds of vocational training, than that we should give an economic value for the number of goals made in a football game, or the number of speeches made in a literary society, or the number of hours spent in a school dance.

Cut out some of these things. Let us deal honestly with this problem. We are trying to make the boys and girls of our country of value to the country, and we ought to value

more than we do the intellectual culture which will be not only the foundation of scholarship, but will also be the foundation for clear thinking on the questions of civic duty, and will give to them a high realization of the great things of the spirit. Are we going to adopt the policy here of simple acceptance of what the National Educational Association, in one of those great mass meetings of theirs, carried away by the fervor of the hour, undertake to dictate to us? Are we going to let the New England colleges take our best boys? They are not going to come down to any such standard as that, and we know it perfectly well. Up in our corner of the state we are going to try our very best to put up such a standard to the high schools, that they will think it worth while to fit boys for Lafayette College, no matter what anybody else says about it. And brethren, I believe you ought to do the same thing. We are going to stultify ourselves if we give up to any committee of the National Educational Association the right to carry this banner of higher education before the American people. The American people do not want anything at half the price, something that is "just as good." They want the real thing. They want their boys and their girls to be stimulated to work for what is worth while; and it is our business to stand to the ideals of scholarship, of intellectual culture and of spiritual achievement. It will be a sad day when we decline from it.

Kendric Charles Babcock, of the Bureau of Education of the United States.

I may not speak about the heart-burnings that I made in the State of Pennsylvania. I want to say two things, Mr. President, in the discussion here, along the lines of the experience of certain institutions which I have had occasion to investigate in the direction of applying the sort of standards which are set up by this report. It is just a question of repeating a few facts from the field in regard to the principles embodied in that report.

The State University of Minnesota has gone further about the acceptance of vocational subjects for colleges and universities than most of the other institutions. I had occasion recently to visit that institution, and confer with Dean Downey as to the result of this method in his school. I asked him, "What has been the tendency of the quality of

students whom you have received in the University of Minnesota in the last eight or ten years? Are you getting better students, better trained, better equipped for university work, under the new regime than heretofore?" After a moment's hesitation he said, "There is quite a recognizable deterioration in the quality of students we have been getting in the last eight or ten years." That is pretty pertinent evidence, because things have gone out there in the manner of taking nearly everything that a person chooses to offer. It must be said that the result in the high schools has not been first-class.

Another great state university has come to the point of view of accepting anything that permits fifteen units, without much regard to the subjects that make up these units. I asked the Dean how the thing was working, and he said pretty well. And, by the way, he is one of the men who signed the report you have just been discussing. I asked him why he signed the report, because I knew he did not believe in it. He said, "I saved my face by making a supplement to the report."

I looked into the matter quite closely. I looked over some hundred of the official cards in another university last fall, and found one thousand and seventy-six units. I looked into about four hundred and fifty-five hundred of them, and came to the conclusion that the application of that principle in that institution was a simple process of getting students under false pretenses. In this way the student may come in with his fifteen units, but he is a very different looking creature after he is in, from what he looked before. He is handicapped by conditions which must be met if he is going on in that line. So the percentage of conditions runs up.

Now, as a matter of fact, these institutions which are accepting what the student chooses to give are saving themselves with the proviso of what the student must take when he gets in. If he comes in with two units of language, he has to have four or six in the course he wants to take, and he must get those after he gets in. A legitimate number of conditions means simply that the student, if he gets into college, has such a handicap as he may conveniently make up and carry on in a four years' course and graduate. If, after he gets in, he must make up four hours instead of two, it is not a fair statement to say that he may graduate under these conditions at the end of four years. That is precisely how it is worked

out in some of those institutions, that a student takes four years and a half or five years to go through, when he might reasonably expect to take but four. It is simply an easy way of getting students under false pretenses.

The next point is that we are shifting this matter of the domination of the high schools by the colleges, to the domination of the colleges by the high schools, and this, it seems to me, makes it clear that the condition of things is one which is not satisfactory. I do not know how many admission papers I have looked over in the last year; but I have been continually surprised at the surplus which the average student is likely to present for admission to college; not merely fourteen or fifteen units, which may be required, but he goes on with a certain sort of pride to present seventeen, eighteen, nineteen and even twenty. Now if five or six units of a lead is not enough, what do they want?

I am not objecting to vocational subjects in high schools; but it seems to me that we are running wild in the response to a certain demand for vocational recognition, including agriculture. Now if you want to conjure, conjure with something by the name of agriculture, from the leaders in Congress, down to the lowliest in their districts. I do not say that it is not good, but to say that it is good for something is not to say that it is good for everything. So I would like to make this report, that it seems very clear from the experience in the institutions that are giving the four required units for vocational work,—even five units possibly, for vocational subjects, as is the case with the University of Minnesota,—the experience of those institutions is not such as to hearten those of us who want a stern and rigid course for the making of men before we make engineers or any other specialized men.

Then the high schools themselves are spreading far out beyond the domain of the college, and no one is saying them nay. But the core is so thin that a cock-sparrow could hardly get his breakfast out of it, and in that, I am sure, there is hardly justification for the cry of domination which we hear. I am speaking from a rather intimate knowledge of high school conditions. For two years I gave a half year of my time to examining high schools all the way from Denver to Spokane, and from Portland to Los Angeles. I visited a thousand in fifteen months. I am sure that the feeling that the high school is to be subservient to the college does not ex-

ist very strongly, and that, by and large, we are to save ourselves, not by lowering the college to meet all the requirements and expectations of the high school, but by a differentiation of admitting schools so that the vocational evil shall be cared for, and the college shall be saved for finer and sterner college leadership.

William Anthony Granville, President, Pennsylvania College, Gettysburg.

I should like to say just a few words in regard to the general educational tendencies which I see in this movement. I can remember the time when we had the rigid curriculum, and I can also remember the time when a good many of the educational institutions in America followed the lead of President Eliot of Harvard, and took the eastern view of the educational system. I think all safe and sane colleges are now taking a middle ground. I feel that in this particular movement we are swinging again to one end of the pendulum. We are going to the extreme from the time when each college had only one set of rigid entrance requirements; and it is well enough for us to stop and pause and think over this question, and see if we are not, or at least if some of us are not being carried to this extreme position, from which we shall, in the course of a few years, have to recede. For myself, I can see absolutely no reason for introducing vocational units for entrance requirements. If they have these qualifications, well and good. It is so much to their benefit. When I went into college I had been a farmer for some years, and I thought I was a pretty fair farmer because I made it pay. Under those conditions I might have gone to the University of Minnesota and obtained one or two credits for agriculture. And there are young ladies entering college who are splendid housekeepers, who can do everything that the average domestic science school can teach them; and they should, of course, be allowed these units on entering college. We might well stop and pause, and not let ourselves be carried away, because I fear we are nearing the extreme end of the pendulum. Whatever anybody else may do, let the educators of Pennsylvania be on the safe and sane side of this question.

THE ALLEGHENY OBSERVATORY

Chancellor McCormick.

I wish to say that I am quite in sympathy with the desire of the Chairman of this Committee to get something definite accomplished. I think Dr. Babcock has struck the heart of this matter. The colleges have not been arbitrarily fixing this standard for the high schools; but the course which the student expects to take requires certain preliminary preparations, and it is not because the college determines that there shall be four years of Latin, or two years of German or French, or whatever it may be, but because the course the student is to take requires these things. The college, therefore, is not dictating to the high schools, but is simply offering a certain course, certain preparation for which is necessary. It seems to me if we can put up the first of these propositions, or the second, or the third, we can very quickly determine which of them are ready to pass, and so get something actually done. Therefore, I would suggest that the first of these recommendations on the part of the committee be approved.

Henry Harbaugh Apple, President, Franklin and Marshall College.

There is just one thing I want to say. There is no time to go into a long discussion of the question that is involved here. As Dr. Sharpless says, it would mean the whole reconstruction of Franklin and Marshall College, and I am very certain that the Board would not sanction the entering upon anything such as is contemplated here. The whole classical idea of our training in Greek and Latin requirements for every boy for the A. B. degree, and the Latin requirement for every boy for the scientific work, would mean a complete change in the curriculum. It would also mean a separation of our work from the higher university work, which, after all, ought to determine this whole thing. I am under the impression that the report which comes before us is not the report of a committee, but carries an individual representation. I feel, therefore, that it is not incumbent upon us to take it up as a whole or in part. For the consideration of a resolution of that kind as to one part means the entrance upon the whole question, and then we ought, logically, to follow it to the conclusion, and vote either yea or nay on the whole question. I think that, in view of what has been presented, and the feel-

ing that we have that our institutions stand for certain things, and that we open our doors only for those who are fitted to enter upon that kind of work, we ought not to take up the voting on a proposition of this kind. I do not know what kind of a motion to make: whether it ought to be referred back to the committee or laid on the table, or what ought to be done: but I feel very reluctant to enter upon the voting on one or two or three resolutions that I might favor, and then be radically opposed to that which comes after. I think the whole thing is involved in one, and should be decided by one resolution.

On motion of President Apple, the report was referred back to the Committee, to be presented to the Association at its next meeting.

Provost Smith of the University of Pennsylvania, Chairman of the Committee on Officers, presented the recommendation of the Committee that the present officers be re-elected, which recommendation was adopted. The matter of selecting the place of the next meeting was left in the hands of the Executive Committee.

The Association extended a vote of thanks to the University of Pittsburgh. President Warfield in a few well-chosen words expressed the appreciation of the Association.

THURSDAY, FEBRUARY 29th.

9:30 A. M. CONFERENCE OF SECONDARY SCHOOLS OF WESTERN PENNSYLVANIA.

Frank E. Baker, Principal Northwestern State Normal School, Presiding.

The reading of the minutes of the previous meeting was dispensed with.

In opening the meeting, the Chairman spoke briefly, as follows:

I hope this conference of normal school principals and high school people is indicative of a new era in school matters in Western Pennsylvania, that was started, I believe, by the adoption of the new course of study in the normal schools by the Board of Principals. I believe no class of schoolmen

needs to get together to talk over relations more than do the normal school and high school people. I hope this conference will be conducive of a great deal of good in the relations between these two departments of the school system of Pennsylvania.

I have worked longer in the high schools than in the normal schools. I know there is in Pennsylvania a feeling of distrust on the part of the high school people for the normal schools; and on the other hand, a feeling of distrust on the part of the normal school people for the high schools; and possibly, in some places, a feeling of jealousy on the part of the normal schools toward the high schools. There is room enough in the western end of Pennsylvania for us all, and I hope we can come to a better understanding of our relations, and a feeling that we can work together for the good of education in general, and that there is work enough for us all to do.

The new course of study in the normal schools has defined very clearly the admission requirements; and while there are a good many things now in the course of study that I wish were different from what they are, that one thing—the definition of entrance requirements—has marked a great step forward. The normal schools, I hope, will take up a definite part of the educational work; and by a part I mean a *part* of the work, not all. I think there has been a feeling on the part of the normal schools in the state of Pennsylvania that they wanted to do all of the work of education, rather than to do a part of it; and I hope that the new course of study, and the new Code, have brought about such a condition that the part of the normal schools in the school work of Pennsylvania is more clearly defined; and that they will do that part, and not attempt it all. That is, they will become an integral part of the school system of Pennsylvania, and not try to be the whole system, as I think the normal schools have tried to do in the past.

I do not believe we have yet come to the point where we are ready for high school requirements for admission to normal schools, for the simple reason that the profession of teaching is not on a high enough plane, and the remuneration not great enough, so that at present we cannot make that requirement for entrance to normal schools.

If we should adopt this plan, as they have in New York

State, we should take all the men out of the Normal Schools. The pay of the teachers is so small that just as soon as you make high school requirements for admission to the normal schools, when the men have gone that far they will not go to normal school, but will stop where they are, and the result will be that we shall not have nearly as many professionally trained teachers in this State as now. In New York, where high school requirements are demanded for entrance to normal schools, they have only about one man in a hundred students; and further than that, under these conditions New York State cannot supply anywhere near the number of professionally trained teachers they should be expected to supply. The result in New York is that all the country high schools have had to establish training departments, in order to furnish the required number of teachers. In these departments the students take about two years' work, largely academic, but partly professional, and then go out to teach. All that training is received under one teacher—academic, professional, and everything else for two years. Had we better adopt the same requirements, and take all the men out of the normal schools? The result will be that all the well trained professional teachers will be women; another result will be that we shall have a much smaller percentage of normal-trained teachers in the schools, and a very small percentage will have had any professional training at all, except what we can give in the high schools.

Or had we better adopt the middle course, which the new course of study has adopted—have part of the work professional and part academic—and then a large number of men in the normal schools who are getting at least some professional training even while the requirements may not be what we wish? I do not believe we are ready for high school requirements for admission to the normal schools, but I think the new course of study has taken a long step in advance. I hope it will bring about better relations between the normal schools and the high schools. I believe a clear understanding of each side in this will be of great advantage. I think the time will come when we will have group courses in the normal schools, these different groups leading to the preparation of teachers for different fields.

I hope this may be a conference where every person present may have a chance to take part in the discussion.

President Baker then introduced the speakers, whose addresses are as follows:

The Reciprocal Relations of the Normal Schools and the High Schools.

For the Normal Schools.

Herbert Burnham Davis, Principal, Southwestern State Normal School, California, Pa.

Mr. Chairman:

The problem of the relation of the Normal School to the High School is not a local one, but is embedded in the fundamental constitution of the two schools as integral parts of a unitary public school system. The main distinction between the schools is to be found in the classification of academic as over against and related to the technical. In such a classification the graded school, the high school and the college form an academic continuum, while the individual technical schools are definite focal points for the work of the academic system.

Since the two schools are but primary parts of one integral system there should be no duplication of work. By this I mean that the normal school should not attempt secondary academic work. Neither is it the function of the high school to overload its at present heavily weighted curriculum with professional and technical studies looking towards final preparation for teaching, any more than it would attempt to give final courses in law, electrical engineering, or collegiate courses in commerce.

If the faculties of these different types of institutions were content to contribute their constituent elements to the vast educational whole, many of our present-day vexing problems would be brought to a full and satisfactory solution.

To me the high school is a sort of differentiating field. It is like the spreading of the beam of light by the diffraction grating, where educational tendencies are broken out and individual refractions determined. The study of this living spectral dispersion is greatly complicated by the constantly increasing number of lines which are continually showing themselves as indications of new elements in life activity.

"The high schools should be the discoverer of talent and genius, and every influence tending to withdraw support from

them, or to weaken confidence in their value, or to confuse the public mind as to the justice of maintaining them at public expense, is hostile to the best interests of all classes."

If we attempt to frame up the aims of the high school as, communicating the achievements of the race; bringing the pupil into close contact with the spiritual life of his country and his time; the awakening and widening of civic and higher human interests; and the arousing and stimulating of the desire for active life in their service; then we shall deprecate hot-bed cultural methods, and the driving of children along the path of adult-invented systems, developed by the average high school teacher who is a college fledgeling with practically no teaching experience or pedagogical training. Thus I began my own work more than a quarter of a century ago, and I am very sure there are others doing the same thing even now.

It is the attempt to avoid the repetition of this social calamity that gives significance to courses of study offered in normal schools and schools of pedagogy. We are beginning to learn from studies in comparative psychology made by such men as Dr. Watson, that the new qualification of the teacher is to be found in the recognition of the fact, first, that "an early scrutiny of tendencies among children, and the prompt enforcement of corrective habits would spare us many a neuropath and many a criminal, even though in such cases the hereditary equipment be poor"; second, that "many incipient tendencies if properly fostered, would lead probably to genius, or certainly to a higher average of efficiency"; third, that "the seemingly slight yet really distressing drawbacks to a career might be prevented, if there is sufficient care spent in the early singling out of the tendencies which underlie them and in taking active measures for their eradication."

In a like vein Claparede writes, "It is the aim of theoretical studies, of science, to reduce to a minimum the vexatious experiments and gropings which always accompany the beginnings of the practice of no matter what art. The education which ought to dominate the whole of our school system, where instruction actually reigns alone, can hardly be carried on at all unless we have before us a clearly defined ideal. In spite of inevitable individual divergencies, educators are agreed in recognizing that it is proper to make of the child an honest and healthy man, independent in mind, and a lover

of the good, the true, and the beautiful, and that his physical and intellectual potentialities should be developed with due regard to his personality."

It has taken us long to learn that there is no common measure between children and grown-up people. The world in which children live is very real to them, although very unreal to us. These years of learning are bringing us to the conception of the teacher as a companion, adviser, leader, rather than master, instructor, and disciplinarian. The present demand is that the teacher enlarge his horizon and then move about in it. The modern seekers after truth must follow wherever it may lead them. The teacher must not only know subject matter, but what is of more importance, he must know human beings. He must understand individual capacities, instincts and differences. He must be able to interpret relations. The state pays dearly in the price of degenerate tone of its children when it allows ill-chosen leaders and unqualified molders of character to meddle with psychic unfolding.

As early as 1844 Samuel J. May stated the three functions of the Normal School to be "(1) to keep out of the profession those who have no natural aptitude for the business, (2) to give to the public all the aid they can in avoiding the selection of those who in spite of their efforts, have got into the profession without possessing those natural qualifications which are essential to success in teaching, and (3) to give to intending teachers who possess the necessary qualifications the utmost possible assistance in preparing for their work."

The results of incompetent teaching are so far-reaching that the normal schools should stand as the guardians of parents and pupils against their baneful outcome. We are just beginning to realize the incalculable amount of waste energy arising from undirected and misdirected effort, want of plan, lack of contagious enthusiasm, irregularity, improper physical conditions, badly arranged courses of study, lack of thoroughness, and imperfect discipline. Such institutions prostitute their existence, if they do not primarily provide the means for the acquisition of a knowledge of the means and ends of education.

"The relation of the teacher to the youth is not mechanical and occasional, as though the young mind were a pump from which the intermittent flow of knowledge may be laboriously drawn. The teacher stands before the undeveloped

capacity of the scholar as an agent in the evolution of a personality. One is not a teacher except he kindle, waken, communicate the contagion of personality, and show the way to truth."

Educational systems exist to adapt individuals to their social life. Thus the trained teacher, who has a clear vision of truth, becomes the focus of social progress. The prime function of the school of the future is to produce the citizen, and any educational adjustment which does not look toward the more efficient provision for such a product had better never have been conceived. Good neighbors, good members of the community, good fathers and mothers are in greater demand than ever before in the history of social evolution. The perplexing problems of industrial order are clamoring for a settlement which shall simplify rather than complicate their character. The relationship of men to one another is a study of the highest importance. We can never secure intelligent social service without social knowledge. The suppression of social evils and the development of moral freedom calls for an unbiased attitude toward all problems. It is here that the well trained teacher finds an opportunity for the exercise of his highest function in the development of the leadership for which his experience should qualify him.

No mathematical calculation can reduce to its lowest terms the value of the training of the elementary teacher. The proper development of the child's mind is conditioned much by the type of training which the teacher receives. The teacher without horizon not only misses perspective, but is biased in interpretation, and dogmatic in statement. As a result the pupil is either suppressed and docile, or merely restrained, but irritable and often rebellious. No curriculum is safe unless it provides for general culture. Any attempt at the topping out process by a study of professional subjects when the basal subjects are lacking is like setting a pyramid on its point.

In view of the above, the function of the high school appears in the furnishing of the academic background necessary to the exercise of the teacher's function, always remembering that the function of the normal school is technical—nothing else. The teacher's background should include a survey of the field of literature, history, mathematics, elementary science, art, modern and ancient language, ethics and so-

ciology. The teacher who cannot keep his gravitational relationship is sure to find the entire field of thought in a nebulous condition. If, on the other hand, the teacher finds his general culture well established in its basal relations, then the purely technical study takes on a deeper significance.

The Normal School position is somewhat controlled, however, by the minimum legal requirements for teaching certificates, and therefore at present must offer some courses to students other than high school graduates, such students being differentiated by the time factor of attendance and examination for advanced standing. The reasons for this double method of treatment of students must be clearly evident, I think, to any who are familiar with the present state certificate granting powers. Vexed problems in this field call for adjustment. The supply and demand, together with minimum terms, minimum salaries and also latitude given directors in the employment of teachers render the present relation of high school and normal school open to rather caustic criticism.

To attempt to give a course of study which should produce a plasticity in the qualified teacher, such that he could not only see clearly the problems of each locality, but also adapt himself and his instruction to them, has hardly been thought of. We have more to learn than we are ready to acknowledge in the construction courses of study, and the time is not far distant when we must approach the problem, not from the standpoint of what we think the pupil demands, but rather from the angle of vision which will show us what the social conditions of the age will demand of the future citizen. The production of an individual who can exercise efficiently the rights of a citizen, will indicate very definitely our approach to the ideal elementary education.

The most constructive criticism which can be offered of the normal school student appears when he is conscious of meeting daily surprises in the newer and clearer perception of the content and significance of elementary subjects, acquires the ability to make a more searching analysis of his own mental activities, and finally is able to demonstrate his ability to impart in the most interesting, scientific and hygienic manner.

The relation of high school to normal school then must be one of cooperation rather than of reciprocity. Each is es-

sential to the other, but their common ground of service is to be found in the perpetuation of efficient educational evolution and continued devotion to the expression in state and municipality of the highest ideals of American citizenship.

The Reciprocal Relations of the Normal Schools and the High Schools.

Discussion.

William Clarence Graham, Principal, Wilkinsburg High School.

Mr. Chairman:

Whether the Pennsylvania Normal Schools have been a great educational blessing, or a great educational hindrance, depends upon the angle from which they are observed. They have been a great blessing in that they, for a generation, have furnished, at moderate cost, an education higher than that given in the grammar schools to thousands of young men and women who would otherwise have been denied this privilege. Many of our successful lawyers, physicians, ministers, and teachers owe to the normal schools a debt of gratitude. The State in turn is indebted to the normal schools because of the great good these men and women have done in the State.

But the normal schools have been a great hindrance to the natural growth and development of the public high schools in our State.

The report of the National Commissioner of Education for 1910 shows that while Pennsylvania has a greater number of normal school students than has any other state in the Union, she has a fewer number of high school students in proportion to her population than has any other northern state. In addition to this we find that the grade of high schools is lower in Pennsylvania than in any other great state. We find that while in the whole country over 800,000 out of the 950,000 high school students are in high schools having a four years' course, in Pennsylvania only 43,000 out of 65,000 are students in high schools having a four years' course.

We believe that these conditions are largely due to the normal schools of the State.

First: The presence of so many normal schools has deterred the smaller boroughs and townships from starting high schools. Those of us who attended school or taught in the

average-sized borough know that the greatest argument put forth against the maintenance of a public high school was, that high schools were unnecessary since there were so many state normal schools at convenient distance. The result was that a few boys and girls went to the normal school, while the great majority dropped out of school.

Second: The standard of the Normal Schools has been so low both as to years for graduation and as to scholarship that it has been difficult for high schools bidding for the same pupils to maintain a high standard.

Third: The average school board until very recently persisted in employing normal graduates to teach in high schools. This possibly has been the greatest hindrance to the growth of high schools, as the normal graduate was, in most cases, totally unfitted for the work—either in point of scholarship or in training.

Fourth: The normal schools have discriminated and are still discriminating against students of the public high schools who desire to enter the normal school in order to obtain a life certificate to teach in the public schools.

However, notwithstanding the handicap placed upon high schools by the normal schools, notwithstanding the opposition of private preparatory schools, which because of sentiment have had a firm hold on the public in some parts of Pennsylvania, and the shortened and arbitrary course of the preparatory schools in connection with most of the colleges in the State; notwithstanding all these, the public high schools, because of the insistent demand, have grown so that we have over eight hundred in the State of Pennsylvania.

What are the conditions of today of the high school in relation to the normal schools in Pennsylvania? The normal schools have about ten thousand students, most of whom are taking the four years' course adopted two or more years ago. The high schools have over fifty thousand students who are taking a four year academic course. The new course of the normal schools requires ten per cent of grammar school studies; fifty-eight per cent of academic studies; and thirty-two per cent of professional studies. The four year high school graduates must take two years in the normal—over one year of these two years is devoted to academic work. This may look like reciprocity from the standpoint of the normal school man, but to the high school man it looks more like a high wall of discriminating protective tariff.

What should the high school reasonably expect from the normal school? Simply that good high schools receive credit for their work, as they now receive credit from practically all of the colleges. This does not mean that we think that two years after graduation in a four years' high school is too much to spend in a normal school; but we do think that the time should be more largely spent upon professional studies and professional training. We do think that if four years of academic work is required of the high school students for entrance to the Junior class of the normal school, that same amount should be required from the student who enters the normal school from the grammar school.

What are the results from the high school standpoint because of the unreasonable relations existing between the normal schools and the high schools? The high school principal, teachers, students, and patrons are not in sympathy with normal schools. In our public high schools is the flower of the community. If there were proper reciprocal relations existing between the high schools and normal schools the great majority of the brightest girls would go to the normal school after graduation from the high school. As it is, most of them go to college, where their previous work is properly credited; hence the normal schools, because of their stand, are not reaping the advantage that they should from the increased educational efficiency brought about by the high school movement.

What is needed in Pennsylvania is a reorganization of the normal schools with reference to the high schools. There should be articulation between the high schools and normal schools as there is now between the colleges and the high schools. I believe that this will be brought about in the course of a few years. The first step is for the State to take over the normal schools and make of them in reality State institutions. The insistent demand for more professional work in the normal schools will lead them to cut out of their course the academic work and turn this over to the high schools where it belongs. When these two great departments of education, the high schools and the normal schools, join hands, the teaching profession in the State of Pennsylvania will be placed upon a much higher level.

Principal Baker:

Principal Graham misunderstood me. I believe in complete recognition of high school work in the normal schools. I do not believe it is possible under the present circumstances. The condition which rises before the normal schools in regard to that question is simply this; we have a large number of students coming to us from rural communities, and they do not have sufficient academic training. Now, if we give complete recognition to high school training for high school graduation, we have to have two complete sets of teachers in the normal schools—one set for academic work and one for professional studies. The state does not give sufficient support to the normal schools to enable them to do this. The whole educational system in this state is about twenty years behind other Eastern states. When we recognize that fact freely, frankly, and openly, then we have gotten to the bed-rock of the whole problem. There is no question about that.

I have taught in high schools much more than in normal schools, and I am in full sympathy with the high schools. I say frankly that I have seen some of the best teaching I have ever seen in the high schools, and when we want new teachers in the normal schools we go to the high schools for good teachers of academic subjects.

But can we make high school graduation a requirement for normal school entrance? If we do, we shall go back to the conditions in New York state. I have been in New York in educational work a long time. The State Department of Education there is wondering what they will do for teachers. They have had to go back to the training class which I have previously mentioned. In that class, students without high school education come from the eighth grade, and get two years' training,—a little academic work, and a little professional work, everything under one teacher, and that teacher usually but a normal school graduate. About half the teachers in New York State have only the training which this class gives them. A very small percentage of the teachers there are graduates of the normal schools.

Should we adopt this requirement, we should take all the men out of the Normal School, and thus have no professionally trained men teaching in the public schools. That is the curse of the rural schools today. Or shall we take, for the present,

the half-way ground, and gradually work toward better things? I believe that is the only thing to do. If we make high school training an entrance requirement in the normal schools, then we shall put the normal schools on the same ground as the colleges. I shall agree to that, if the normal schools will grant degrees for professional training in teaching just as the technical schools do in other professions.

Before that you must treble or quadruple the teachers' salaries, or not one in three hundred will do it, because they cannot afford it. In Indiana, where they try this system, they have eighty normal school graduates in one year going out into the public schools. That is all the professionally trained teachers in the state. The rest come directly from the public or high schools, without a bit of professional training. The half-way ground is better until we pay salaries to teachers sufficient to enable them to go to high school and then to normal school for professional training. Then, and not till then, I shall believe in it.

The Reciprocal Relations of the Normal Schools and the High Schools.

For the High Schools.

George E. Mark, Principal, Sewickley High School.

Mr. Chairman:

The gentlemen who have already spoken have covered my ground, either in stating the proposition or in rebuttal, so that it seems hardly worth while to go on.

I wish to discuss the matters as they are, not as they might be. I want to call attention to the fact that all the high schools of Pennsylvania have to consider is in this question—whether our high school students should go to normal school after completing a three or four year course; and whether the normal school is properly training teachers to take up high school work. I have tried to make this paper fit the point exactly, so there will be no difficulty in following the discussion of the topic.

Nothing in this paper should be considered as a condemnation of the normal school as a necessary part of our state school system. There is no notion that the normal schools should be dispensed with. It is acknowledged that they have been of the greatest service to education in Penn-

sylvania, and are yet performing a service not now done so well along certain lines by any other school organization of the state. In the days when elementary education was about all the education received by the children of the Commonwealth, when the teaching force was without dignity and any adequate scholarship for even elementary schools, when chaos reigned in method, and educational history was part of the equipment of the very few, then the normal school brought a help nowhere else in the organized form to be received.

The first state normal school in this state was established under the normal school law of 1857 at Millersville, Pa. This institution has been of untold value to the common schools of this state. It has given inspiration to many a student about to go out to teach; and very able men and women first received a regulated conception of education and ideas of method in this school.

The Lancaster County community has sent its boys and girls to the normal school. To most of them it has stood for more than Yale or Harvard, and today it is more favorably known among them than Franklin and Marshall College, of Lancaster. Numbers of the farmers of the county have at some time attended this first Pennsylvania Normal School, and the whole intellectual life of this fertile region has been stimulated and uplifted. Sons and daughters have graduated from "the normal", taught a term or more of school, and many later have sent their own sons and daughters to this transforming institution.

Such has been the history of other communities in which normal schools of the state have been placed. Socially they have been efficient; educationally they have been efficient. This efficiency must have rested upon sufficient courses. What the normal schools have given to the community in an educational way can be clearly marked out. (1) They gave a higher degree of scholarship than was customary in the common schools of the state for many years. (2) They gave a better and clearer conception of what a school should be in organization. (3) They taught methods which were far better than those then generally followed, and which stood for economy of time and energy. (4) They presented educational ideals through their own teaching force and through the study of educational history. The result was better schools in which normal school trained teachers presided.

Such was the great contribution which the normal schools gave to the elementary schools in the state of Pennsylvania. Please note that I emphasize *elementary*.

With a development of secondary schools in the public school system came a corresponding development in secondary education in the normal schools. It was necessary to have the graduates of the normal schools qualified for teaching in these newly-organized high schools. The course of study for the normal schools as revised in 1900 seemed for a time satisfactory, especially for high schools that were doubtfully secondary in curriculum, or else had but a few years of real high school work. The boroughs and large towns finally began to support high schools of three and four years' courses, with college graduates as principals and teachers. The normal school graduate was looked upon as not being, from the scholarship point of view, qualified, and hence he either dropped from the ranks of secondary teachers or sought for the education in some college, that he might enlarge his range of scholarship, and so hold the better positions offered in high school work.

The course of 1900 was a three year course, having certain substitute branches of study for the usual course in Junior, Middle and Senior years. But even with this advance, many high schools sprung up having courses of equal scholarship with the normal schools. Another revision of the course of these state schools was necessary. This was the course adopted December 30, 1910, under which students will be graduated after 1913. Will the next revision be to make all normal school courses of high standing, college rank? The electives of the 1910 course point to the college; but full college rank would require a full faculty of college scholarship equipment.

The conditions of admission to the normal schools under the revision of 1910 read as follows:

> "Properly certified graduates of approved Pennsylvania high schools of the first grade, and city high schools as listed by the Department of Public Instruction, shall be admitted to the third year of the four years' course of the State Normal Schools without examination, and be conditioned in the branches that have not been satisfactorily completed by such students.

"Properly certified graduates of approved Pennsylvania high schools of the second grade shall be admitted to the second year of the four years course of the State Normal Schools without examination, and be conditioned in the branches that have not been satisfactorily completed by such students."

The new course of study also gives the standing of graduates of third class high schools, and of other applicants for admission, but I shall not quote them here.

High school graduates of a four years' course hesitate somewhat at the idea of repeating work done in high school. Let us examine the curriculum of the normal schools of the 1910 revision. Take the third and fourth years, which four year high school graduates take when entering the state schools. In the third year of the normal school course we find the usual third year high school Latin, the English of the high school, its United States History and Civics, its Solid Geometry and Trigonometry, its Physics, and Physical Training. Of course, for Cicero, French, or German, the History of Arts and Sciences may be substituted; and for Solid Geometry and Trigonometry, Geology and Astronomy may be substituted. The subjects which the high school might not have taught are Psychology and Observation, School Sanitation, and Methods in History and Geography. All the others the high school had, with instructors as carefully chosen for qualifications as those found in our normal schools.

In the fourth year of the normal school the subjects common to the high school are Virgil, German and French, Chemistry, Manual Training or Domestic Science, Physical Training, and Public Speaking. The state school allows a substitution of Ethics, Logic and Sociology for Virgil, German and French; or the Philosophy of Education or Surveying for Ethics, Logic, and Sociology. The subjects which the high school would not have taught are Practice in Teaching, History of Education, Agriculture and Nature Study (except in the rural high schools), Ethics, Logic, Sociology, Philosophy of Education, Methods in Arithmetic and Grammar.

From the standpoint of scholarship the normal schools do not have a course broad enough to warrant a high school graduate spending two years in the normal school. Certainly these two years in college would have meant more to the student, in educational spirit, in outlook on life, and in the devel-

opment of initiative and personal responsibility. What is the use of discussing the personnel of the faculties of the state normal schools? Of course there are strong men among them, men who stand high in scholarship and pedagogical ability; but it is as true for this state as for others that "inbreeding" is practiced too generally. It is true also that normal school salaries are not sufficient to hold the best teachers; hence a few strong teachers are paid fairly well, and others are paid less, and therefore are correspondingly less fit to be the trainers and instructors of prospective teachers.

Scholarship stands for a good deal in the work of a teacher. It helps to maintain ideals; it offers boundless resources for illustration; it opens up large views in comparison; and it has dynamic power for stimulation on the part of students. It is absolutely essential that the faculties of our training schools should be high in scholastic qualifications; else what respect will the graduates of our best high schools and colleges have for normal school professors who in too many cases have no more scholarship than themselves, or but slightly more? There is a reason for our high school graduates not attending in numbers our state normals. The scholarship standard of the teaching force is one strong reason.

From the standpoint of scholarship, then, the normal school has nothing to induce the three or four year high school graduate to attend it. It is to be noticed, however, that in the third and fourth years of the courses of the state schools we have Methods in History and Geography, Practice in Teaching, History of Education, Methods in Arithmetic and Grammar. This indicates professional training, of course. And the greatest amount of emphasis is placed upon teacher training, because teachers, not scholars, are to be the result of the normal school course, we are told. But why make a distinction between teachers and scholars? Why could not the teacher be a scholar also? Certainly the dry bones of method would take on life if this could be. Just as the scholarship of the normal school is much beyond that of the elementary public school course, so should the scholarship of the normal school be much beyond that of the high school course.

So far, then, in this discussion we have elaborated the points that (1) the Normal School has served best the elementary schools of the State; and (2) that it does not serve

the interests of our high schools, because its curriculum does not meet the needs of secondary education in scholarship.

The matter of methods and practice in methods in a practice school is the strong feature of the normal course. Let us see how the practice schools of the state normals meet high school needs. We can get at this question best by asking, What does the Normal School do by the way of supplying teachers for the high school? Following our assertion that the normal school is deficient on the scholarship side, and therefore its graduates are badly prepared to teach in high schools, we make the assertion further that from the standpoint of teacher training it is not prepared to fit the students for secondary teaching. The catalogs of our normal schools make much of their model or practice schools; and so they should, for in spite of the shortcomings of these same practice schools, they have been of great service in teacher training. But these practice schools are made up mostly of elementary grades, from the first grade to the eighth grade inclusive. Some of the normal schools make no pretense of secondary teacher training in practice, and they seem to understand that there can be no training without practice. One normal school catalogs a high school principal, but not anywhere else does it mention any secondary teacher practice school; its practice school is purely elementary, so its catalog says. How does this school train its students for secondary school work, we wonder?

Another normal school has in its model school two hundred and fifty-two pupils for all the grades, and three years of high school. No word is said about how many students are in high school. We wonder how the students of this normal school are trained for secondary school teaching. But this is a generous school, for "College graduates who graduate at this normal school may receive a diploma, including the studies of their college course, in addition to the branches of the regular course."

Do not college graduates who intend to teach Latin, or physics, or German, or botany, or high school literature and rhetoric, or geometry, need training in the pedagogy of these subjects,—a pedagogy tested by practice—just as much as the normal school student, who intends to teach in the grades, needs special instruction and practice in the method of reading, the method of number, the method of geography, etc.?

High school teaching, of course, implies general method, but it also implies special method; and this special method must take note of the new point of view in high school work, and that other important matter—adolescent psychology. How does the normal school meet this problem? Plainly, it does not meet it, and hence those who select teachers do not go to the normal schools for their high school faculty.

It is important also that the normal school teachers of secondary subjects should not only be well informed in their subjects, but they should also be experts in the pedagogy of their subjects. They must not only know their subjects, but they must also know how to teach others to teach these subjects. Yet when one looks over the various normal school catalogs, one finds the heads of the departments of secondary or collegiate subjects holding degrees of scholarship, no degrees indicating anything in pedagogical skill. Experience and acquaintanceship with normal schools leaves no doubt that for the proper training of teachers for the high schools, the normal schools are not very well prepared.

With their present organization the normal schools of the state will continue to furnish the great body of skilled teachers for the state's elementary schools and our two year high schools; but for all progressive high schools of three and four year courses, the normal school can do nothing.

How shall high school principals advise their students who intend to teach? They will do it just as we have done it. There is a girl in our high school who wishes to be a teacher. We have told her not to take more than one or two years in our high school. Then she should go to a state normal school, where she will graduate in two or three years, thus saving at least two or three years in favor of earning power. This young student will be a teacher in the grades. All other students, graduating from our high school, we advise to go to college, and if they wish to teach to attend such a college as has a teachers' department well developed. By so doing they will get breadth of scholarship, educational outlook, the opinions of educational scholars, and the spirit of initiative. They will be, for secondary or high school, better prepared than if they with the same purpose had spent the time at the state normal schools.

We wish to make it plainly understood that we do not hold the normal school in scorn. It is doing all that it can do

under the circumstances. It may have a great future. Certainly one of two things will happen to it; it must either confine its teacher training wholly to the elementary grades of our public schools, or it must take on collegiate rank with college requirements for admission. If the second alternative is not taken, the teachers' colleges of our universities will become the great training centers for all teachers of our higher schools, and further, they will also supply teachers for the seventh and eighth grades of our elementary schools. The Los Angeles Normal School in California requires a college standard for admission, and is more exacting than all the other colleges of the state, except one. This normal school is marking the way for many others in our country. Conditions in this state, of course, are somewhat different. They cannot be changed for some time. We have gone along as fast as sentiment will allow us to go, with the rather slow Pennsylvania Dutch way of moving, which is a good thing in its way.

We reach the propositions, therefore, (1) that it is inadvisable for our high school graduates to attend our state normal schools, because the normal school standard of scholarship is not high enough, both in its curriculum and in its faculty; (2) that the normal schools do not properly prepare their own graduates, or college graduates, who may attend them, for high school positions, both in respect to scholarship and in respect to the methods and practice of high school subjects of study; and (3) that the high schools must look to the university or college training schools for secondary school teachers.

Principal Baker:

One or two things in Mr. Mark's paper seem to be a little in error. I believe the normal schools confine their own graduates to teaching the common branches. We have but one teacher (at Edinboro) who has not had training above that of the normal schools. I believe our faculty will compare well with that of the small colleges. We have nobody teaching other than the common branches who has had less than university training, and I believe this is true of other schools. The salaries in the high schools are not yet great enough to demand college courses of the normal schools. The majority of the high schools are too small. The only thing

to do is to go half way in this proposition, or else have salaries trebled, or quadrupled; then the normal schools may get ready for other things.

The Reciprocal Relations of the Normal Schools and the High Schools.

Discussion.

Willis Y. Welch, Professor, Clarion State Normal School.

Fellow Teachers:

It is certainly refreshing, after the discussion we listened to yesterday and last evening covering the great broad ideals of institutions, to come here and have presented to us some of the practical problems that we as normal and high school teachers must confront. I believe, as our Chairman said at the beginning, that if we had more frequent conferences between instructors from the high schools and normal schools, and our county superintendents, that better work would be done, both in the high schools and normal schools.

The peculiar condition that exists in this state concerning the normal schools has been ably presented in the two papers read; and I want to call attention to the fact that both were indictments of the public school system of Pennsylvania. The feeling that has grown up, and is fostered to some extent, I fear, by both high schools and normal schools, is due to the fact that the normal schools are not, as they should be, a part of the public school system. They have been declared by law to be private institutions; this has been confirmed by a decision of court. Their establishment was in accordance with the laws, but the curriculum under which they are teaching is the work of the principals of the normal schools of the state, and not the work of the state itself. So we come down to the solid fact that our normal schools need to be taken possession of by the State, and made a part of the educational system of the State. When that result has been achieved, I doubt whether there will be any reason for any feeling of difference between the normal schools and the high schools.

The great problem that confronts the normal schools and the high schools, and every other educational institution, differs in no wise from a problem in business. Any man

who makes an investment in business is constantly trying to solve this problem, "Does it pay?", and I believe that educationally we should apply the same test to schools,—elementary, secondary, high school or normal school, and higher institutions of learning. But there is this vast difference between the answer to the question "Does it pay?" in business investment and school investment. A man who puts his time, energy, and money into a business investment expects and is not satisfied unless he gets a return in coin—a financial return. The teacher, the state, the community, that puts its money, its time, and its energy, into the teaching of pupils, does not expect its return to be a financial return, but a betterment of the state and a betterment of the community.

I do not believe there can be a negative answer to the question "Do the high schools pay?" Most certainly they do pay. But I doubt very much, although I am a normal school instructor myself, that our normal schools pay to the extent they should pay; that they give back to the State the compensation in teaching force that they should give to the State. This is due partly to the fact that they are not a part of the public school system. I know teachers who have never attended a normal school who are as good teachers as any who have attended; but I know this to be a fact which more than counterbalances the other—that the majority of the best teachers are graduates of normal schools. While there are a few who have never attended the normal schools, and have made their mark as splendid teachers—men of great ability along their lines of work—the great majority of the best teachers, not only in Pennsylvania, but in New York, and in other states, are the individuals who have had courses of vocational training in the normal schools of their state.

There are various reasons why the normal schools of this state and other states do not turn out the best teachers, or as good teachers as they should turn out. If a normal school has any excuse for existence, it must be training teachers to do better work than that for which they can be trained elsewhere. Unless the normal schools are turning out, in a majority of cases, teachers who are better able to do their work, then they have no excuse for existence.

Now, one of the reasons is that normal school instructors do not keep in touch with what is going on in elementary and secondary schools. In many cases they are like two county

institute instructors with whom I had a conversation some time ago. In talking with one, I said to him, "You come here as an instructor to people teaching in elementary schools; how often do you visit schools of this class?" He replied, "I have not been inside of an elementary school for nine years." I asked him, "Do you take any paper devoted to elementary school work?" "No," he said, "I take papers devoted to educational work, but none that are given entirely to elementary school work." When I turned to the second man he said, "You must not ask me. I will tell you, though; but it is not for publication. I have not been inside the door of a school of lower rank than a college since I graduated from college, twenty-three years ago."

Many of our normal school instructors fail to keep in touch with the wants of elementary schools; and for that reason when they are called on for work along the line of applying in the elementary schools subjects they are teaching, they are unable to do it.

Secondly,—and this, I believe, is a very important reason—we pay too much attention to the academic subjects, and too little to the differentiation of the individuals who enter the normal schools; separating the sheep from the goats, the good teachers from those who are not fit to teach. We send them out as graduates of our normal schools, whether or not they are fit to teach, because they have passed a State Board examination, based mainly upon their knowledge of academic subjects; sending them forth with a certificate from the normal school which in every case reads identically the same from beginning to end. There is nothing in it which tells whether one is better able to teach than another. So the work of the normal schools fails in this respect.

Too little attention is paid to the separating and the study of the individual capabilities of the teacher. We ought to have different grades of certificates. Our normal schools ought to be able, when they give an individual a certificate, to indicate that for which the normal school stands—capability as a teacher, and the ability to present subjects in the best manner.

The third reason, which I have already mentioned, is that our normal schools are not strictly a part of the educational system of the State. The method of examination in them is a peculiar one. City and county superintendents, normal

school principals, and others skilled in this work, for one or two days examine people who have worked under the direction of instructors in the normal schools for two, three, or four years; and in one or two days these examiners pass upon their qualifications. Imagine any such condition in any other vocational school in the world. Imagine an architect examining a bricklayer or a mason, to know whether he is better capable of putting up a building, rather than the man under whom the bricklayer has served his apprenticeship.

The normal schools are not doing the best they could do, but they are accomplishing a grand and noble work. Teachers in the state of Pennsylvania, especially the teachers in the small boroughs and towns, and country schools, are doing better work because they are receiving a good portion of their training and teaching in the normal schools. Our presiding officer told you something of the work in New York, and if it were not for discussion this afternoon, I should like to enlarge upon this side; for there are two sides to the subject. I believe in normal school training, because I believe, in spite of the last speaker, that teachers in the normal schools are specialists in their line of work; not academically, but pedagogically; and one reason why our normal schools teach the same subjects that are taught in the high schools, is that you can best teach an individual how to teach a given subject by teaching that subject to him as it ought to be taught. I believe this is one of the strong reasons why our normal schools should take up, in a measure, the same academic subjects as are taught in the high schools. Your own experience will justify me in this statement: in the majority of cases you are teaching as you were taught, and so I believe that a strong reason for having academic subjects in our normal school is that those teachers who should be, and, I believe, in the majority of cases are, specialists in their line, may teach a subject as it ought to be taught; and for that reason academic subjects such as are taught in our high schools should be included in our normal schools.

The relation which exists between the normal schools and the high schools has been forcibly referred to several times. I believe as Dr. Baker and Dr. Davis do, that we should give recognition in the normal schools to all the academic work done in the high schools—give credit for every bit of time. According to the new course of study, we must give credit

for all the work in the first two years of the normal school that is completed in the high school. I do not see why it should stop there. If in the normal school there is a subject in the third year in which the student has received thorough instruction in a high school, and has passed satisfactorily, I see no reason why that credit should not be accepted in the normal school; this as well as the work in the first or second year. I believe in full recognition of work in first class high schools. If you will analyze it carefully and thoughtfully, you will see that the result of the new four years' course of study will be this: that it will make of our normal schools a two year normal; for a graduate of a four years' course in a good high school need attend the normal school but two years. These two years are needed, in order that the person may be trained in those things that have to do with his vocation, teaching the child; and if there is any vocation in which instruction is needed, I believe it to be in the teaching vocation. There was a time not many years ago when there were two vocations in which it was thought anybody could do work; if a failure was made in anything else, make one of two things of him, either a farmer or a school teacher. That time has passed , both for the farmers and school teachers. Study of the soil, alternation of crops, scientific stock raising, etc., have given a new kind of instruction for farming; and in the same way those who are to become teachers, not only in our elementary schools, but in our secondary schools, need training in teacher training. They need training as teachers.

Our normal school diploma, like the diploma of the college,—and I draw no line of distinction between them, although our teachers in the high schools are college graduates, and teachers in the elementary schools may be normal school graduates—the diploma of one should have as much of the capabilities of the individual as the other, no matter whether from the college or the normal. This is not done in either case.

A few statements have been made concerning normal school work which the Chairman has taken opportunity to answer, so I need not say much about them. I wish to say something about a subject which I broached before. Why not do our training of teachers in the high schools, as well as in the normal schools? I gave you one reason why, on the

side of the normal schools, where the teachers should be, and I believe, are specialists along their line, they are better fitted to train teachers than those whose work has been merely the presentation of academic subjects; but I can see a reason why, in a great city like Pittsburgh, or any other city where they have a bright, able, progressive superintendent of public instruction, such as this city has secured, there should be teacher training under the direction and care of that superintendent. I believe that under this supervision city training schools have a good chance for work; in fact, they are a necessity. But the normal schools throughout the various portions of the State of Pennsylvania are also a necessity for the training of elementary and secondary school teachers.

After announcements had been made by Dr. Linhart, Secretary of the University of Pittsburgh, regarding the exercises which were to follow, Chairman Baker placed before the meeting a proposition that the remainder of the forenoon session be devoted to a discussion of the previous papers, the remainder of the program to be continued to the afternoon.

Principal Davis called attention to the fact of the joint conference between colleges and secondary schools in the afternoon program, which would conflict with the proposed change of program. The proposition was accordingly dropped, and the remaining papers were given according to the program.

Normal Training in the High School.

Ernest Clapp Noyes, Professor, Pittsburgh High School.

Mr. Chairman:

The preceding speaker has led directly into my paper, by his suggestion of the propriety of giving normal training in the high school; and one of the earlier speakers has already given a very potent reason therefor. I refer to Mr. Graham, of Wilkinsburg, who mentioned the demand of some eighteen or twenty of his students each year to enter normal school. If they ask it, why should we not give it?

Of all the questions now demanding the attention of educators, there are none, as you know, about which there is more difference of opinion than those concerned with the training of teachers and with the organization and curriculum of the high school. Since Normal Training in the High School involves

both of these debatable questions, it suggests a problem bristling with difficulties.

Indeed, there are those who, when confronted with this subject, would say, like the farmer at the circus when he saw a giraffe for the first time, "There ain't no sich a thing", and dismiss as too absurd to consider what exists before their eyes.

Nevertheless, normal training in the high school is so general throughout the country that it cannot be ignored. The topic before us is both real and vital. To show the extent to which high schools are taking part in the work of training teachers, let me recall to you a few facts and figures. There are four states—Wisconsin, Kansas, Nebraska, and Vermont—in which the training of teachers in the high school has been authorized by law. In other states,—notably New York, Minnesota, and Michigan—state aid is granted to teachers' training classes, which, though separate from the high schools, are maintained by boards of education and are of secondary grade. The report of the United States Commissioner of Education shows that in 1906-7, nearly sixteen per cent of all the students in teacher training courses in the United States, and more than ten per cent of those in Pennsylvania, were enrolled in high schools. The high school in this city contains a normal department which has been in existence since 1870, and which has graduated more than a majority of all the teachers in the city schools. The situation revealed by these facts, with which you are familiar, makes it impossible to dismiss the subject of normal training in the high school without serious consideration. It is a condition, not a theory, that confronts us.

In a discussion of the work in teacher training done by the high school there are three questions to be considered:

(1) What has led the already over-burdened high school to undertake the preparation of teachers?

(2) What preparation does the high school give?

(3) How can normal training in the high school be made more valuable?

This paper is an attempt to answer in the order named these three questions.

First, the high school has added teacher training to its other functions in order to meet genuine needs of the community. These needs are two: that of the families from which the

normal students come, and that of the schools to which they go as teachers. In every community able to maintain a high school there are many young people eager to become teachers whose families are unwilling or unable to educate them beyond the scope of the public schools. The heads of such families have in effect said to the authorities of the high schools: "You are giving our *sons* courses to prepare them for business careers; why can't you give our *daughters* a course that will prepare *them* for teaching?"

At the same time the schools of the country have been calling for high school graduates, both to complete the necessary number of teachers, and in many cases to improve the quality. Pennsylvania, for example, requires annually about forty-two hundred teachers, while the State normal schools graduate only from fifteen hundred to seventeen hundred. Since the supply from sources other than the high school is far from equal to the demand, the high school graduate is welcomed by the schools that do not pay salaries large enough to attract better trained teachers, and she has little difficulty in obtaining a position. Under these circumstances, the high school graduate, *with* or *without* special preparation, *will* teach and *does* teach. It has been estimated that in some states from twenty-five to forty per cent of the graduates of high schools go directly into teaching without further training. This being the case, both the high school pupil who looks forward to teaching and the school authorities under whom she is destined to serve, join the parents of the girl in the reasonable demand that the high school give her as much normal training as possible, rather than let her go out into the defenseless schools with no preparation at all.

Furthermore, in country districts where the pay is small a large proportion of the teachers lack even the equivalent of a high school education. In no state in the Union are the normal schools supplying the demands of the rural districts. To satisfy the urgent need of the country schools for teachers better educated both academically and professionally is one of the duties thrust upon the high school.

As long as families from which teachers come continue to demand that they be spared the expense of sending their children away from home to be prepared for their vocation; as long as the schools of the country continue to need more teachers than can be supplied by the colleges and the state normals; and as long as many country schools continue to be adminis-

tered by ill-equipped teachers; so long will there be a legitimate field for normal training in the high school.

Yet, in spite of all that can be said in favor of the introduction of normal training into the high school, its warmest champions when faced with the question "What is the training now given by high schools?" must admit that at best it is only a temporary expedient, necessary to meet present needs but destined soon to give way to something better.

That the study of education has a justifiable place in the high school as a social subject, giving the student knowledge and interests fitting him to be a useful member of society, cannot be denied. At present, however, the study of education is in most schools a purely vocational subject. If we regard teaching as a profession requiring the highest qualities in its practitioners, under ideal conditions there is no more valid reason for the pursuit of education as a professional subject in high schools than there is for the pursuit of medicine, law, or theology. The high school student is incapable of being properly prepared to enter at once upon teaching. He lacks not merely professional equipment, but what is more important, maturity of mind and character. Besides, it is impossible satisfactorily to combine in one course academic and professional study, a task which must be attempted by the high school that gives normal training. From the academic standpoint the end is the subject-matter and its value to the student; from the normal standpoint the ends are the value of the subject in an educational process, and the best mode of presenting it to secure the highest value. The effort to combine the two places the professional study at a minimum and the academic at a maximum relation.

No one conversant with the facts will deny that the existence of normal training in the high school represents a state of affairs as far from ideal as these objections indicate. Still, as long as *conditions* persist in lagging *equally* far behind the ideal, we must retain teacher-training classes in the high schools, and meet, as best we may, the difficulties inherent in the scheme; all the time striving to bring conditions nearer the ideal. Perhaps a brief examination of the work done in normal training by the Pittsburgh High School will show that the gap between the actual and the ideal may be no greater in this than in many another field.

The course of study, admission to which is by examination after the completion of the course in the elementary schools of the city, covers four years, during which every subject is re-

quired of every student. The academic work of the four years may be briefly summarized as follows: In English, four years of literature and composition; in mathematics, three years, including algebra, and plane and solid geometry; in science, four years, comprising elementary science, physiology, chemistry, zoology, physical geography, geology, and astronomy; in Latin, two years of work with special attention to the derivation of English words from Latin stems; in history, three years in cluding ancient, medieval, modern, and United States history, and civics; drawing, elocution and manual training are studied four years; physical culture, two; and music, one. To such a solid foundation are added in the last two years, as professional branches: the history of education, psychology, and pedagogy; reviews of all the subjects in the elementary curriculum with methods of teaching each; professional reading; observation, and practice.

To supplement theoretical work by practical experience each member of the Senior class is required to teach at least four successive weeks in one of the practice rooms connected with the normal department. During that time she has entire charge of the room in instruction, discipline, and clerical work. All this is done under the direction, instruction, and criticism of a training teacher who is in daily communication with the other members of the Normal Faculty.

The course in all respects is of as high grade as that of the State Normal Schools, if not higher. The school has a faculty of nineteen, selected for qualifications to teach and give methods. It requires a higher percentage for promotion from one class to the next than any other department of the high school, and its students have much of the earnestness and the professional spirit usually commended in normal schools.

The best proof of the value of the training given by the Normal Department of the Pittsburgh High School is to be found by applying the test of pragmatism, does it make successful teachers? The record shows not only that a majority of the city teachers are graduates of the Normal Department, and that the County Superintendent of Schools has come to value highly the services of its graduates in the county schools, but also that many have reached the higher positions. Among the graduates in the city schools are: two supervisors, thirty-five assistant principals, thirty-eight eighth grade teachers, fourteen teachers of special branches, three high school teachers, and five principals.

Having now considered the conditions that have brought normal training into the high school and kept it there, having examined a typical high school normal department to see just what can be done and is being done for the high school training of teachers, let us look into the future to see how the present situation can be improved.

Normal training in the high school in the future should show progress in at least four respects: in the quality of the students, in the quality of the faculty, in the number of schools in which it is given, and in the length and quality of the course.

It is obvious that no school, however well conducted, can make successful teachers out of students who lack either health or the indefinable qualities classed under personality. The old saying, "Teachers are born, not made", contains at least a half-truth. It is a waste of valuable time and effort as well as of money to give normal training to students who, it is evident, cannot become the kind of teachers wanted in the schools. And it is false kindness to encourage such students to attempt to make themselves what the Lord never intended them to be.

For these reasons the normal school of the future, whatever its grade, should exercise a selective function and eliminate from the candidates for entrance, and as early as possible from the students already in the school, not only those who lack the requisite intellectual ability, but also those who are deficient in the equally important qualities of maturity, health, natural fitness to teach, common sense, and character. Students should be received only on probation, and the incapable and unfit weeded out before they permanently inflict themselves upon helpless children as teachers "for revenue only".

Equal care should be displayed in the selection of the faculty for the ideal normal high school. It is obvious that they should be chosen for special qualifications to do the work of training teachers as well as for scholarship and personality, and that they should all be in sympathy with the purpose and methods of the school. They should also be broad-minded men and women of the world, with many interests, specialists free from pedantry. In short, they should be such as to command the respect and confidence of the entire community. Only when this is true, will the school hold its rightful place at the head of the system of which it is a part. To secure such educational leaders it will be necessary to pay salaries commensurate with the value of the service rendered. One of the city training colleges is now paying $3,000.00 apiece for ten months of service

to five members of its faculty beside the principal, with a pro rata addition for work done in the summer school. Results, the principal declares, are showing the wisdom of this enlightened policy.

In the third place, normal training should be given in a greater number of high schools than at present, especially in those of the smaller cities and of townships. Wherever it is demanded by local needs, it should be made a part of the high school work, always accompanied, however, by active efforts to improve the conditions that make it desirable. It should be offered, of course, only by schools able to secure adequate equipment for the purpose, including laboratories, a well-trained faculty, and opportunity for observation and practice.

Professional study should be confined to the last two years of the course, should occupy no more than one-fourth of these years, and should be planned with special reference to the needs of rural schools.

In order to raise the standards of rural schools "high school graduates", Dr. Draper has urged, "should be encouraged to enter teaching". Realizing, nevertheless, that without preparation these graduates would gain *at the expense of the schools* the training they *should* have acquired from the experience of *others,* he has organized in New York State a flourishing system of teachers' training classes, which are of secondary grade. Of these he says, "They are the most fruitful if not the most hopeful source of good teachers for the district schools." Similar testimony has been given by the State Superintendents of Michigan and Nebraska. If normal training were commonly furnished by high schools, much of the enormous and deplorable waste in rural education would be prevented.

To prevent misinterpretation, let me repeat that normal training in a four years' high school course is not urged as an ideal plan, but only as a temporary scheme demanded by existing conditions, which ought to be improved as rapidly as possible. When a whole loaf cannot be obtained, surely half a loaf is better than no bread.

In the larger cities, however, the case is different from that of the country towns. Educational standards are so much higher in the city than in the country that many cities now require six years of study beyond the grammar school from all candidates for teaching positions. Certainly, six years is the minimum length desirable for a thorough course of normal

training; and there are those who argue strongly for seven years of work. In most cities the six years of study are divided between the high school and the teachers' college or training school with a two year course, to enter which a high school diploma is necessary. Such systems are in operation in forty-five or more cities throughout the country, among which are, in this state, Altoona, Erie, Harrisburg, Reading, Scranton, and Philadelphia.

Though this plan is producing very valuable results, it is open to two objections. First, the division of the course into two distinct parts destroys unity in both aim and method. Secondly, since in these days of elective courses, a high school diploma does not stand for the completion of any definite list of subjects, the preparation of those who enter the training school not only must be far from uniform, but what is more important, may fail to include studies essential to the prospective teacher. Students whose previous work has not included liberal courses in science and history, and thorough training in drawing, for example, are at a serious disadvantage in preparing for teaching in elementary schools; and the time to make up these deficiencies can ill be spared from the proper work of the normal school.

Therefore, a plan that promises better results is to give the entire course preparatory to teaching in one institution, a normal high school with a six year course, and under one faculty. Such a plan would avoid the lack of unity in the other system, and would insure for every student a course carefully planned with a single aim from beginning to end, and containing all the studies requisite for the realization of that aim. The proposed scheme would also afford a greater opportunity than the other for the development of professional and school spirit, and for the teaching of students from the first in the habits of neatness, concentration and logical thinking that are so necessary to the efficient teacher.

Furthermore, there would be a distinct gain to the student in being for the whole period of six years in close contact with the normal faculty. Most beginners in teaching, when in doubt, will fall back on the examples of their own teachers. They will teach as they have been taught. Consequently, those who expect to become teachers, should be given only the best teachers as examples, so that by imitation, conscious or unconscious, they will acquire correct habits. The faculty of the normal high school should excel all other teachers in the city in

practical skill, and should exemplify in their instruction the best methods of procedure. Surely an unbroken period of six years under instruction of such experts would be of inestimable value in the formation of sound habits. For these reasons, then—the gain in unity of aim, in proper direction of the work in the earlier years, in professional spirit, and in the duration of the influence of a strong faculty—city teacher-training should be given, not in two separate institutions, but in one six year high school.

This six year course should consist of four years of broad academic education, including a generous share of the physical and biological sciences; a thorough course in history; mathematics through geometry; at least one foreign language, better two, of which one should be Latin; a full course in literature and composition together with cultivation of the speaking voice; drawing; and physical culture. In the fifth year should come reviews of the elementary branches, study of the professional branches, training in the school arts of manual training, sewing, music, and penmanship, and a study of children's literature with practice in reading and story-telling. The first half of the sixth year should be spent in observation and practice teaching in all grades of certain grammar schools selected for the purpose. This work should be under the supervision of a director of practice. The final half year should be given to the completion and review of professional studies at the normal high school. This period should be especially valuable, because *then* the study of theory will be illumined by the previous practice.

In each of the last two years students should be required to read five or ten books on professional subjects, to be chosen from a prescribed list. This reading should be done both for the intrinsic value of the books and for the formation of the habit of professional reading.

After the graduates of the school have entered upon teaching, members of the normal faculty should visit their school-rooms from time to time not only to criticise, advise and encourage the teacher, but also to discover the defects in the training given by the school with a view to remedying these.

Wherever colleges and universities can be found willing to co-operate with a school of this kind by giving its graduates credit for two years of college work, the graduates should be encouraged after they have taught for a year or so to continue their education by the completion of a college course.

Such a normal high school as has been sketched, combining details, every one of which, save perhaps the six year course, is now successfully employed by some institution for training teachers, would render invaluable service to the city supporting it. It would afford a source of supply for teachers not merely thoroughly trained, but also familiar with local problems, to meet which they would be especially prepared by observation and abundant practice under actual teaching conditions. In addition, it would provide a valuable means of improving teachers already in service by extension, Saturday, and summer courses; by the infusion of a progressive spirit into the teaching force; and by the elevation of the educational ideals of the whole community. Finally, it would serve as an educational laboratory for the scientific study of local problems and for the testing of educational theories by experts.

To sum up, normal training in the high school is today an indisputable fact. It meets real needs of parents and schools, and under present conditions it is performing a worthy, if not an ideal service. In the future, not only should students and faculties be more carefully selected; but for the benefit of the rural schools, on the one hand, normal training should be introduced into high schools more generally; and for the sake of the city schools, on the other hand, wherever possible the course should be prolonged, in the high schools, to six years. Such a two-fold enlargement of the facilities for preparing skilled teachers would contribute more than any other single agency to the uplifting of our common schools.

Normal Training in the High School.

Discussion.

McClellan Gordon, Assistant Professor of Mathematics, Pennsylvania State Normal School, Indiana, Pa.

Mr. Chairman:

I wish to say in regard to the paper just read that a paper could not be more fair or just than this paper has been. The writer did not pretend to say, and did not say, that normal training in the high school is ideal; he said that it met a need. And it does meet a need. However, I would never be willing to agree that the normal training in the high school should be carried to the rural township high schools and small boroughs, because I believe the conditions there would not warrant it, and

it could not be carried out successfully there. Even the degree of success with which it meets in the city high schools could not be met there.

Normal training in the high schools, as has been stated by Mr. Noyes, has grown out of the needs of the schools; and I presume one of the causes that has led to this establishment is the fact that the authorities in the cities have learned that unless these people receive some training in the high schools they will become teachers in the schools without any training whatever; because conditions are such in the city, that through local influence, through politicians and other persons living in the city, taxpayers are bound to secure positions for the young people whether or not they are trained for the work. It is not an unusual thing for experienced teachers, who have been well trained in training schools, to be dismissed to make room for the sister or the cousin of a person living in the city who is related to a politician or a member of the board.

It is true that the normal schools and other training schools of the state do not supply enough teachers for the schools; but it seems to me that if a higher premium were placed upon excellent teaching and normal training, the supply would be greater. Many do not avail themselves of the advantages of the best schools, because they feel they can secure positions without training. They feel that is is not necessary to secure the best training to be had; but they step into schools as soon as possible.

So I would urge that compensation for teachers be made higher; that they be selected with greater care; and I have no doubt that when the new Code is in effect in this and other cities, and when teachers are selected from eligibility lists, conditions will be changed so that only teachers who are trained will be elected, and they will then retain their positions.

I cannot help reminding you that a little more than a year ago, when we had a similar conference here, the normal schools were used for a football, to be kicked around; and today it is nearly as bad.

I wish those of you who are so bitter against the normal schools would visit them, and understand conditions there, and understand that a great many of the people we must take into the normal schools are boys and girls who did not do well in their schools here, because their parents could not keep them at work, or out of society. So they dumped them on us. We do not want them; keep them at home. Let

us have people who are willing and anxious to do right. In a great many cases of this kind we would rather have them stay at home and finish their high school courses. We do not want to tear down the high schools. Principals often write me and accuse me of stealing their students. I am no highway robber; in these instances the individuals thought conditions at the normal school would be more favorable for their success. Being kept in and at work in the evenings, they were able to accomplish more, and were prepared sooner for teaching. In a great many towns, the high school boys and girls must be in society; they must have their dances, and other functions, and spend their evenings in that sort of thing. Many of them fall behind in their work, and are not able to graduate. Perhaps in the second or third year of their high school course they drop out; then we get them. We do not want that type of students. I would like to see an arrangement made so that these students, in order to get into the normal schools, must have a certificate saying they are qualified to enter upon the work that will confront them.

So we would like some of these gentlemen who *seem* perhaps to be a little more bitter than they *are,* to come and visit the normal schools, and see what is going on; and we would be happier and know each other better.

It was found that the time was insufficient for further discussion of the papers.

Professor C. B. Robertson of the University of Pittsburgh, announced a meeting of the Upper Ohio Valley Secondary School Association, to be held in the Fort Pitt Hotel on Saturday morning, March 16th.

The meeting was then adjourned, the delegates being guests of the University at luncheon at the clubhouse of the Pittsburgh Athletic Association.

THURSDAY, FEBRUARY 29th.

2:00 P. M. JOINT CONFERENCE OF COLLEGES AND SECONDARY SCHOOLS.

David B. Oliver, President, Pittsburgh Board of Public Education, Presiding.

The Joint Conference of Colleges and Secondary Schools was called to order by Chancellor McCormick, who presented Mr. Oliver, the presiding officer. The Chairman then introduced the speakers, whose addresses follow:

High School Inspection by the College.

Miss Anna Jane McKeag, President, Wilson College.

Mr. Chairman, Ladies and Gentlemen:

I have been introduced as having an address. That is too formal a title for the very informal remarks that I shall be able to make this afternoon. As many of you know, I am in the process of transition from Wellesley College to Wilson College, and all my pedagogical material is at present stored in boxes, and not yet unpacked. I have been somewhat limited in my time, as well as in my facilities for preparation for the exercises of this afternoon, and I feel apologetic, and feel that I cannot do justice to the importance of this occasion. What I have to say, therefore, must necessarily be very informal.

In thinking about the subject of the inspection of high schools by colleges, I find that my point of view is one that has undergone a general process of modification. I began educational work in the public schools of Pennsylvania. I have had experience also in private secondary schools, and as a teacher of so-called academic subjects in a small college, and as a teacher of education in a large college; and now I find myself taking up the administrative work in a small college. So I find that my point of view is a combination of points of view gained in those various kinds of experience, and that I am not so ready with a remedy for existing evils as I might have been a good many years ago. I feel the difficulty of the situation much more keenly than I did when I began my work as a teacher.

In trying to understand the possibilities of inspection of high schools by colleges, I think we ought to keep in mind the evolution of the high school. You will pardon my reference to

a time-worn theme. We must remember the pit from whence the high school was digged. All of us probably know that the original secondary institution in this country was the grammar school; and the grammar school was not the grammar school in the sense in which we use the term now, but was modeled after the grammar school of old England, which was distinctly a school for the teaching of Latin and Greek. The grammar school period in this country lasted, as we all probably know, up to the period of the Revolution; then from the period of the Revolution to about 1850, or perhaps up to the Civil War, we have the academy period in secondary education, a period when secondary education was in process of transition from the old aristocratic, somewhat limited grammar school to the more democratic, more liberal academy. The academy represented a distinctly more liberal curriculum than did the old grammar school. The academy reached the great middle classes, which the grammar school in the pre-Revolutionary period decidedly did not.

From 1850, or from the beginning of the Civil War, we find the High School developing. As a matter of fact, the first high school in the modern sense was the Boys' English School in Boston, founded in 1821. How did the high school differ from the grammar school and from the academy? It was the peoples' school, the school which aimed to reach not merely the highest class, as did the old grammar school; not merely the highest class and the middle class, as did the academy; but it aimed to reach all classes of people. It was distinctly the democratic institution in secondary education.

High schools developed rapidly after the Civil War. There were very few high schools in existence back of the Civil War. But in the years following the Civil War, the high school developed very rapidly indeed, and now the high school itself has undergone several periods. Some one this morning referred to those periods in the evolution of the high school. The first, I should say, is the period when the high schools were few in number, their influence very much limited, and their aim the preparation of boys and girls for the activities of life,—boys and girls who did not expect to go to college. Those who were destined for college careers attended other institutions. That was the first period. The high school course was not at all a preparation for college.

The second period was the period when the high school aimed to prepare a few people for college. The majority of

the pupils were not going to college. We find many subjects included for those who are not going to college. Then third, we find the high school in which the demand for college preparation is greater. A larger number of boys and girls are preparing for college. As President Stanley Hall is fond of saying, it is the period when the jingle of the college warden's keys are heard in every high school. That period, I think, has passed also, and we are now passing through the fourth stage in the existence of the high school—the period of re-adjustment. The period when the rights of the boys and girls who are not going to college are being recognized, and when the demand for preparation for college work is also receiving recognition. So we are now in the period of re-adjustment. It is a confused and rather chaotic period. No one can be present at meetings of colleges and preparatory schools without hearing this question of the relation of the college to the preparatory schools threshed out to some extent at every meeting. That is, then, the present status of the relation of the high school to the college—a condition of things when there are many problems yet unsolved, and when we are seeking all the light we can get on these great questions.

On thinking over this question of the inspection of high schools by colleges, it seemed to me that perhaps the most profitable thing that I could bring before you would be some actual facts in regard to inspection as it is carried on in some parts of the United States. We find the very greatest diversity of practice in this matter. I do not mean that we can ever arrive at uniformity of practice in all the states of our country. Take the western states, for example. There we have the great state universities which connect legally with the public school system of the state. We have what they call in those states the educational ladder, where the child enters the kindergarten and finds that his education is paid for at public expense, from the kindergarten through the university. The university is an integral part of the state system of education. I cannot think that in states where there is a highly centralized system of education, such as is the case in Indiana, California, and Michigan, and the states in which there is a decentralized system of education, such as is the case in the New England States—that in those two classes of states we can ever arrive at entire uniformity. But I think uniformity is desirable.

It may be profitable for us to review for a few moments the schemes that have been worked out in the states where

there is a highly centralized system of education. I have selected as typical instances of high school inspection by colleges, the conditions that obtain in Indiana and Michigan; and in the relation of the North Central Association of Colleges and Preparatory Schools to the colleges and preparatory schools; and in California. These are all cases taken from parts of the country where there is a highly centralized system of education, and where we have the so-called educational ladder.

First of all, I should like to speak of one or two things connected with the inspection of high schools by colleges in the State of Indiana. I have here a statement from the Department of Public Instruction, which gives very concisely the exact relation, so far as the matter of inspection is concerned. You are all familiar with the general educational arrangements of Indiana. The State University of Indiana is the top round of the educational ladder. The Superintendent of Public Instruction states: "The State Board of Education in Indiana inspects the commissioned high schools of the State. The President of the State University is *ex-officio* a member of this Board. Each year the state is divided into districts, and the President of the State University is assigned one of the districts, in which he is to visit the commissioned high schools. His district is changed from year to year, and in this way he visits a large majority of the schools of the State. This is also true of the President of Purdue University, and the head of the State Normal School."

I ought perhaps to say a word in explanation of that term "commissioned high school". The State of Indiana distinguishes between commissioned high schools and certified high schools, and the distinction is briefly this: the commissioned high school is one which has been inspected, and has been pronounced as having facilities adequate to prepare students for entrance to the freshman class of the State University; so the term "commissioned" is used in reference to the admission to the State University. It is commissioned to prepare students for full entrance to the freshman class of the State University.

The term "certified high school" has an entirely different significance. The certified high school is one which is authorized by the State Board of Education to certify, if I may use the same word again, that its graduates have complied with the requirements made of public school teachers, that they be graduates of a high school. So the commissioned high school has relation to the university; the certified high school has rela-

tion to the certification of teachers. And it is, therefore, the commissioned high school with which we are concerned in the State of Indiana, in the matter of inspection by colleges. The President of the University, as I have said, is an *ex-officio* member of the State Board of Education, so that inspection in Indiana is a legally authorized state function, and is, therefore, greatly simplified.

Now, in Michigan there is a relation very similar to that in Indiana, but a relation that is perhaps a little less close between the University and the high school. All of us, I suppose, know that the whole matter of accrediting students for entrance to the freshman class from the high school began in the University of Michigan about forty years ago, and has spread all over the country. Now in Michigan the universities inspect high schools, at the request of the Board of Education of a particular high school; that is,—if I may use the word initiative, which has been cited several times at these meetings—the initiative rests with the local board of education. A high school desires to prepare pupils for the University of Michigan, and its board of education requests that the University send an inspector. The University selects a suitable inspector for the high school, and it is then decided whether the high school complies with the conditions. I haven't time this afternoon, and I will not weary you with a citation of all the conditions which are made by the University; but I should like to speak of two or three of them. In the first place, no high school is accredited by the University of Michigan which does not have at least three teachers. That provision is made, I suppose, because of the practical impossibility of preparation of students over a four years' high school course with fewer than three teachers. Fifteen units must be offered by the high school. That is, the high school must give a course which will admit of the applicant offering fifteen units; and a unit, as defined by the University of Michigan, means five recitations per week for a year; and nine of those fifteen units are required units. Another requirement is very interesting—that no teacher may teach more than seven periods a day. That insures stronger work, of course, in each class.

As a third type of inspection, I wish to cite that of inspection by the North Central Association of Colleges and Preparatory Schools. That is a voluntary organization, and the relations of universities and high schools to it are purely voluntary. It extends over an area including several states. The North

Central Association requires of the high schools that seek its certification that when they are inspected there must be fifteen units offered; that the teachers must be college graduates; that no teacher must teach more than five periods; that there must be not fewer than four teachers; and—this I think is interesting—that there must be an average of not more than thirty pupils per teacher. That is very interesting. It is something that does not appear in very many of the regulations. That is, no high school will be reported upon favorably by the inspector sent out by the North Central Association that does not comply with these, and various other conditions which I have not mentioned. I ought to say parenthetically that in all these regulations there appear statements in regard to library and laboratory facilities. I have taken that for granted, and so have not called attention to it in the reports of the various states.

The Board of Inspectors in the North Central Association is made up of the inspectors from the state universities,—where there is a state university,—and there are a few other members added who are not *ex-officio* members of the Board; that is, *ex-officio* in the sense of not being there because of their office as state inspectors of universities.

The fourth and last of these special instances that I wish to cite is that of the University of California. There are a good many interesting things connected with the inspection of high schools by the University of California. California again has a highly centralized system of education, the State University being, to use the phrase I used a moment ago, the top rung of the educational ladder. California aims to certify high schools as schools, rather than by subjects. In some of the papers which I have here, official documents from the universities, the statement is made repeatedly that the university does not aim to have the inspection carried on by highly trained department specialists; that the aim is to certify the school as a whole, rather than to certify departments in the school. If I understand the conditions there, a school is or is not upon the whole looked upon as being properly equipped to prepare students for entrance to the freshman class in the University of California. Another very interesting condition is that all students in the University of California are looked upon as being in a probationary status during the freshman year. I have had two or three explanations given of that. One was suggested at the meeting this morning, and I will not repeat it, but the

official statement is that students are in a probationary status during the freshman year, so that their remaining in the University depends upon the work they do during their freshman year.

Another interesting condition connected with the inspection of the University of California is this: that statistical records are kept by the Dean of the College in the University of California, of the work of the freshman class. This work is carried on as follows: The Dean or other officer keeps a record of each student, and, of course, of the high school from which he has come. At the end of the year what is called the index figure for each high school is made out, and it is made in this way: suppose there are five grades of scholarship, numbered one, two, three, four, and five. If during that year five freshmen from a certain high school have attained a grade of one, the highest grade; if twenty-one freshmen have attained the second highest grade of scholarship; if twenty freshmen have attained the third grade; if five freshmen from the same high school have attained the fourth grade of scholarship; and two have the lowest grade of scholarship, making fifty-three students in all from that particular high school; the University uses the following method to determine what it calls the index figure of efficiency of that high school. I said that five students made the highest grade. Five times one are five. Twenty-one students made the second grade. Twenty-one times two are forty-two. Twenty students made the third grade. Twenty times three make sixty. Five students made the fourth grade. Five times four make twenty. Two students were so unfortunate as to attain only the fifth grade of scholarship; and two times five equals ten. The total number of students is fifty-three. The five products that I have mentioned,—five, forty-two, sixty, twenty, ten—added together make one hundred and thirty-seven. Dividing the products of each grade of scholarship by the number of students attaining that grade; that is, dividing one hundred and thirty-seven by the total number of students from that high school, namely fifty-three—we have one hundred and thirty-seven divided by fifty-three, which gives us two and fifty-eight one hundredths plus, as the index figure of that high school for that year. The records are kept of each high school in this way, and in this way the ratings are made; a method of rating the high schools

by the scholarship of students who enter from that particular high school. It is a complicated system, but it seems to me it has good points, and it might be of interest for some of us to try it. The ratings are made, I said, for the freshman year. It is for the first semester of the freshman year, because it is believed that in the first semester of the freshman year the work of the high school most plainly shows itself. The student is the least changed by the college, and is more entirely the product of the high school. If he has been accustomed to lax methods of work in the high school, it is sure to show itself in the freshman year of the college. The academic Ethiopian, I suppose, does not change his skin when he enters the college.

So much for these instances of what is actually being done in the way of inspection of high schools by colleges. If you ask me for any ideal method, I have to say that I do not know it. There are many things to be considered. In this state we have not the highly centralized system of education that Indiana has, or Michigan; and it would be difficult to adopt, without modifications, any one of these western methods of inspection of high schools by colleges. I should like to mention a few things that it seems to me we might keep in mind in considering the matter of the inspection of high schools by colleges. I am thoroughly in sympathy with the movement of the last few years toward the standardization of terms. That is a different thing from the absolute standardization of entrance requirements. I think we should all profit very greatly if we could agree upon a meaning of the term "unit". Of course, many organizations have been at work upon that, and we have some definitions of a unit; but that is one of the kinds of standardization that I believe to be profitable. Chancellor Brown, formerly Commissioner of Education of the United States, used to speak a great deal in his reports about the importance of institutional coherence; and this is one of the ways by which we can arrive at some degree of institutional coherence. As to whether we can obtain any concensus of opinion among colleges as to the demand, I have doubts. I am in sympathy with one of the speakers of this morning, who stated it as his opinion that the time has come when there should be a differentiation among colleges. I believe that there is a place for several kinds of colleges—for the liberal culture colleges, for institutions that are distinctly vocational, and perhaps for other types of institutions—but I think it extremely doubtful whether any

one institution ought to attempt to do all these things. But that is another matter.

There is a good deal to be said in favor of a judgment of high schools based upon the scholarship of the high schools. I favor the accrediting system, rather than the examination system used exclusively. The examination system is a substitute for the accrediting system, when conditions are such that accrediting is impossible. But if we can devise a system which will judge the high school by the output, and especially by the ability of high school students to do our first year college work, we shall have attained the thing we need. I suppose I am here simply repeating commonplaces. Every one of us believes that the ultimate test is the ability of high school graduates to do our freshman year work in college. How can we determine that in advance? Or must we, to some extent, adopt a probationary standard; that is, admit these students in a probationary way? I think that we need more differentiation of high schools. We need, in a legitimate way, certainly, a high grade classical high schools which will prepare boys and girls for the classical colleges, the liberal culture colleges. Then we need technical high schools which will prepare boys for institutions of technology of various kinds. We need commercial high schools, which will prepare for business pursuits. The differentiation of high schools must, I think, accompany the differentiation of colleges; and I believe that that will be one of the things which we shall see in the next ten years—different kinds of colleges, meeting the needs of various kinds of people, and different kinds of high schools, meeting the needs of various kinds of people—and I believe that thereby we shall gain our ends much better than by an attempt to do many kinds of things under one roof.

A great deal has been said in the reports of the Carnegie Foundation, and in other reports that we have been reading in the last few years, about the importance of a certain homogeneousness of our student body in colleges. I am not speaking now of universities where the various professional schools and the colleges naturally bring together many kinds and many interests. I am speaking now of the college, and more particularly of the small college,—the last stronghold of the intellectual life of this country, the last stronghold of idealism.

In all our dealings with high schools, and all our arrangements connected with colleges, we must, I believe, oppose everything which will tend to lessen the demand upon students

for solid, rigid, thorough work. Our colleges should stand for that; whether they are vocational colleges or liberal culture colleges, they should stand for solidity and honesty of attainment. We should publish the truth in our catalogs, and we should adhere rigidly to our catalog requirements.

I apologize for this very fragmentary presentation of a subject of such importance. I trust that those who succeed me on the platform will do better than I have been able to do.

High School Inspection by the College.

Discussion.

John Abram Shott, Professor of Psychology and Education, Westminster College.

Mr. Chairman:

High school education is in a stage of transition, and the work of the college as well seems at least to be approaching such a stage. From a period of narrow curriculum suggested by the colleges, meager equipment, and inexperienced teachers, the high school is passing rapidly to an enriched curriculum planned by the high school itself to meet the requirements of the complex society and adapted to the need of adolescent youth.

The high school pupil for the college professor is an abstraction. For the high school teacher the pupil is a concrete reality, that he has learned to know and to serve. He prescribes treatment to which the pupil responds at the time, and trusts that in the future the pupil will receive the treatment which he needs then.

In 1910, the Superintendent of Public Instruction in Wisconsin said: "The colleges with their narrow and false ideals of culture, their unwillingness to recognize the educational value of subjects that possess direct utility, their insistence upon college and university methods in secondary education, have molded high school education so far as they were able into a thing of narrowness instead of breadth, into a thing of relative uselessness instead of a large usefulness, and have thus dominated to a degree that has become in many states an intolerable impertinence". Principal McAndrew said: "We have driven away those who most need us. God knows a child of fourteen is not as well equipped for life as we can equip him if we will turn our minds and hearts toward him and not to-

ward scholastic bigots whose conception of the high school teacher is a door-tender to a college hall."

I am pleased to note that these statements were not made in Pennsylvania, and that they were made almost two years ago. A college president in Ohio said in 1911: "The complacent satisfaction of too many college workers is a curse rather than a blessing to education. The institutions of higher learning must be linked to the public schools in sympathetic co-operation with those who are responsible for the effectiveness of the secondary school, if higher education is to mean all it can mean by way of everything that is best in American life". Co-operation is essential among the various and several departments of our educational system. This president said: "We can never have this co-operation so long as those responsible for the secondary schools, animated by jealousy, assume the scornful or flippant air of defiance toward those who teach in the colleges". And again, "We shall never have this co-operation so long as college professors are snobbish and take refuge in a self-opinionated and false sense of their superiority. There is often little ground for this superiority of college professors. Too many of them have no pedagogical point of view".

About a year ago there appeared in an issue of "Science" the expression, "College Pedagogy is a subject yet unborn". In the N. E. A. report for 1911 we find the proposition that no one should be on the teaching staff for Freshmen in a college who has not had experience in the secondary schools. In the same report a professor in a great university says: "In speaking of special attention that Freshmen should receive, real teaching of elementary students necessitates that there must be a co-operation between instructor and students to the end that students may think consecutively and effectively concerning the subject in hand". It would seem that during the past year there has been a birth of little Pedagogy that is applicable in teaching Freshmen. I said that the college is approaching a transition stage. At present all is ferment and discontent. We have as many forms of electives and groups of studies and standards of measurement as there are institutions. If a great university adopts an elective system we all like sheep go astray, and if the university reverses itself, we rejoice to return home.

But the high school has asserted its right to solve its own problem, and has made such splendid progress in becoming

the school of the whole people that it challenges the attention and respect of the college. The college is ready to inspect the high school, not only with a view to noting the prescribed work that prepares for college, but with a willingness to find suggestions for its own procedure. It may soon make the high school its point of departure and co-operate with it in a common aim. It may soon be ready for a transition from a traditional narrow curriculum by which it aims to produce professional scholars created in the image of the college professor to an enriched modern curriculum that will produce citizens of intelligence concerning the materials utilized by modern civilization.

The majority of students in college have not formed their life purposes, and often the college professor is interested only in those who give promise of becoming scholars in his own department. The college is not helping them to find themselves. It is letting human interests go by default while it is enslaved by a few traditional terms that it does not understand. It is high time that such terms as power, discipline, culture, and truth for its own sake be defined anew. I would like to see it an absolute requirement that every teacher in the college be thoroughly familiar with the history, problems, aims and processes of secondary education; and besides be required to be thoroughly familiar through inspection by actual visitation with every high school within a radius of one hundred miles of his college. I know a large high school that has not been visited by a college professor for nine years, and yet I suppose the colleges are legislating concerning that high school. A superintendent of schools said recently: "I would not take the word of those college professors about the qualifications of college graduates to teach in the high school, for they simply do not know". The superintendent admitted that he did not know the professors whom he charged of not knowing the high school. Let us get acquainted and unjust criticism will cease. Let us meet as individuals in this high school arena where the most important educational problems are to be solved, and work together as disinterested students of education for the solution of our common difficulties. Let us remember that the welfare of the individual pupil is more important than any system, or standard, or course of study, or methods of inspection, of any institution. It is only by intelligent and sympathetic co-operation between the units in a system of education that the system itself can be successful. The college visitor or inspector should not be

looked upon as a college drummer. He should be welcomed as one who is looking to see how the college can be more successful in discharging its increasing responsibility in preparation for teachers for the high school. The visitor should see the adaptability of the high school to the needs of the community in which it is located. He should see the extent to which undesirable college practices are being aped by the high schools. He should see the teachers, the methods, process and product of the high schools, all of which would enable him to be fair and just to the applicant who applies for admission to the college.

I hope we are approaching a time in which we shall not prescribe entrance requirements for high schools to follow in preparation for college; a time when we shall have not accrediting committees, nor examination boards; but when the high schools are so fully meeting the local and wider social needs of education that a certificate from the high school will pass the pupil into college because the college knows from its own individual inspection what the certificate represents, and because further it expects each college student to make good or seek some other field of effort.

High School Inspection by the College.

Discussion.

John B. Geissinger, Principal, Greensburg High School.

Mr. Chairman and Fellow Teachers:

In view of what has been brought out in the discussion so far, I feel that what little I have to say would be a mere repetition of what has been already expressed. However, I beg your indulgence while I read what I have to say.

Until recently the college has formulated in a somewhat detailed way the precise subjects and the amount of each which it desired its students to present upon entrance. It is not necessary to recount the exact topics which were thus designated. Suffice it to say that the larger part of a student's high school course was required to fulfil these obligations, and that it was extremely difficult for a student to enter college if he had not reached his decision so to do during the early years of his high school work, and selected his course accordingly. The effect of these requirements upon the schools which attempted to train pupils for the college was often seriously embarrassing. They found themselves on the one hand obliged to supply stu-

dents with instruction in the particular subjects demanded by the college, and on the other hand they were increasingly subjected to pressure from the communities about them to furnish larger opportunities for a study in the subjects thought to be of a more practical character,—especially such as were believed to be of a vocational kind.

From the side of the university the situation has also had several drawbacks. The college has received large numbers of students conditioned in one or more subjects, or if not conditioned, very poorly trained in one or another direction, because of the poor instruction which the high school has been able to afford in some of the lines demanded by the college for entrance. This has had a disturbing influence over the first year of the work of such students in college, owing to their incapacity to carry forward the prescribed courses. This difficulty often extended beyond the first year of college, and frequently resulted in having the high school graduate cease his usefulness as a college student. Most unfortunate of all, perhaps, the situation has put the college in the position of interposing obstacles in the attempt of the high schools to respond intelligently and sympathetically to the demands of their communities. All this has brought about dissatisfaction. The high schools accused the colleges of domination and dictation in setting up arbitrary standards. They believed the college to be a master and themselves servants. On the other hand, the colleges accused the high schools of inefficiency because of the weakness of their product in the way of candidates for college admission.

However, through the combined efforts of the faculties of our colleges and high schools a satisfactory agreement has been reached, and the problem of the proper articulation of the high school and the college has been in a large measure solved. Certain changes and concessions have been made, with the result that both institutions will profit by them.

Briefly speaking, the program upon which agreement has been reached is as follows: It was the strong conviction of both parties that the old idea that the college preparatory course is of necessity, the course of most value to the pupil who will not go to college, now is false. It is recognized, however, that there are a certain few so-called "academic" or regular subjects of the school curriculum that constitute a solid foundation upon which the best and strongest educational edifice is still to be built. Again, the program to which the col-

lege has committed itself in the matter of the high school course of study involves primarily the desire to co-operate with the schools in the most effective way possible, to release them from all arbitrary obligations, so as to enable them to accommodate themselves to the new demands made by their constituencies. For this the high schools are eminently thankful. It is further agreed that almost any subject may contribute to real culture if studied in the right way. The college is therefore willing to recognize as worthy of college entrance credit any subject suitable to be taught in a high school, as soon as such a subject is properly organized and standardized, and as soon as it can be and is well taught; provided it is to be continued in the college, or correlates with college work. After disposing of this question of educational values, so far as it concerns their fitness for college preparation, what then shall determine whether a pupil has been efficiently instructed or a subject well taught? The earliest method of testing the fitness of a candidate for admission to college was the oral examination; and if modern conditions permitted, no better method could be devised today. An experienced teacher can in a half hour's interview sound the depths or shallows of a boy's knowledge of the subjects in which he is himself proficient, more satisfactorily than any examination board with all its elaborate machinery. But the growth of the colleges and the number of candidates has rendered the oral examinations impracticable, and written examinations took their place, and were for many years the only test imposed on applicants for admission to college, the school preparing them not being considered. Some still claim that this is the most satisfactory method, yet we all know that it has its weaknesses. Out of the acknowledged weakness of the examination system grew the certificate system, at least partly. The other motive that underlay the experiment was a desire to bring about a closer union between school and college.

Since the graduate of the grammar school is ordinarily advanced to the high school without special examination, and since the college graduate needs nothing more than his diploma to admit him to the professional school, the question naturally arose why the intermediate step between the high school and the college might not be taken without special examination.

The certificate system was first introduced by the University of Michigan in 1871. In "The Educational Review" for

June, 1893, the purpose of the system and its advantages were stated as follows: "At the time the system of admitting students on certificate was adopted at the University of Michigan, now more than twenty years ago, the purpose was to bind the University and the preparatory schools of the state into a closer alliance for purpose of mutual helpfulness. A somewhat thorough study of systems of admitting students to the higher institutions of learning in other countries, led to the belief that a carefully guarded method by which pupils of approved schools should be admitted without examination would prove beneficial to the schools as well as to the college. The system was constructed in such a way as to throw upon the university the responsibility of examining not the student, but the school, and on the other hand, to throw upon the individual school the responsibility for the preparation of the students admitted". Here, then, college inspection of high schools had its origin, and has since been used by many colleges.

Has it been successful? After five years' trial an examination of records showed that the standing of the students admitted by certificate was considerably higher than that of those admitted by examination. There seemed, moreover, the conclusive evidence that the schools were greatly benefited by the arrangement. The University of Chicago has for years admitted students upon certificate from certain approved schools. These schools have been subjected to careful examination by the University inspector. New schools will hereafter be admitted to this list of approved institutions upon the recommendation of the inspector. But the retention of a school upon the list will be determined by the records which its students make after coming to the University. To this end it is proposed that at frequent intervals the principal of each school shall be supplied with a transcript of the records of the students from that school in residence at the University. From a college authority we quote the following: "It will certainly be recognized that a test of this character is the only one at all fair or adequate to determine whether a school is doing the kind of work which will enable its students to pursue their studies in the University with advantage".

President Northrop, of the University of Minnesota, in speaking of the advantages of the system says:

> "1. It raises the standard and grade of the preparatory school.

2. It gives us students better prepared for college work.

3. It does away with an immense amount of work and worry incident to examinations.

4. It gives better results from the student when once in the University".

From the standpoint of the high school we quote the following: "A very great advantage is experienced by the preparing school. The visit of the committee (as is the case in Minnesota) or the inspector from the University is an event looked forward to as an affair of great importance to the teachers and pupils. The examination when properly conducted includes an inspection of the class work of every teacher and a careful report upon the nature of the work done. Such a visit is and must be of the very greatest importance to the school in question. Another advantage is in the fact that all the pupils become accustomed to thinking that the high school is not the end of a good education. Consequently a large number who would otherwise end their school days at the completion of their high school course are fired with a desire to go forward for a further term of study in a college or university".

Judging from the evidence as submitted from these sources, one would be obliged to come to the conclusion that the system is satisfactory. It seems to work well in the central and western states, and has a host of advocates. The essence of the plan is, however, not merely college inspection of high schools, but supervision of high schools, and that more especially by the state university. This is the situation in Minnesota. The state university makes certain specific requirements as to course of study, subjects to be taught, and assignment of units of credits. An inspector is appointed to visit the high school from time to time, and ascertain whether the equipment, course of study and teaching staff are adequate, and actually turning out good work. The inspector offers advice and encouragement, points out weak spots, and in general assists the schools in standardizing themselves. On the face of it this looks good, especially for the University of Minnesota, and we can also see how it would result in bringing the various high schools of the state to a more uniform standard of excellence. Hence the favorable testimony just quoted.

From other sources and from competent observers in Minnesota comes the statement that the University, whether

intentionally or not, really dominates the situation in that state, even though the State Superintendent and certain other representatives of the Department of Education are made partners in the transaction.

The question naturally arises, then, why should the state university be entitled to this distinction rather than any other college or university in the state?

By their very nature as public institutions, the high schools of the state should be subject to no other domination except that which the state sees fit to exert through legislation and through the department of education. There is, therefore, no excuse for the control of high schools by the University in any state in which the high schools have been brought up to a reasonable standard of excellence, and in which the State has come to realize the necessity of making a school system out of the schools of the State. The state university is often spoken of as the head of the school system. If this is true,—and it is in the sense that it is the highest school in the system—then the state university should rest squarely upon the preparation given by the school next lower in the system. The head should not separate itself arbitrarily from the body, nor should it use the body so entirely to its own ends as to leave the feet dangling in the air.

Again, some states have very definite systems of high school inspection and supervision by the State department, by which courses of study are prescribed and examinations set for the high school diploma. This inspection is most desirable, and productive of good results, as we all know. Now this inspection, together with the inspection by the college or a number of colleges, would naturally lead to a double-headed system of inspection, or even a confusion of inspection, with the result that there would be a paralleling, a duplicating, or even a conflicting of the work. From the standpoint of efficiency and economy, unity and centralization of inspection of high schools, however that might be accomplished, would seem to be most rational.

It has been hinted by some who are suspiciously inclined concerning the system of college inspection, that the inspector usually represents a particular university or college, and there is always the possibility that the function of the local high school as an advanced common school shall be subordinated in the mind of the inspector to its function of preparing students for his own institution. It is charged, indeed, that in some

states, the inspector or "visitor" regards himself as an advertising agent, and devotes his strength mainly to urging high school pupils to attend his college; and that, familiar with college methods, and perhaps not too well acquainted with boys and girls, he is too much inclined to praise where praise is not due, to criticise where criticism is not due, and to suggest methods that are not generally practical or sound. While this looks threatening, yet in reality we do not believe it to be of sufficient consequence to discuss here, and so simply mention it as one of the possible dangers in connection with the system.

The new system of the University of Chicago, as stated before, based on inspection of high schools, but upon only one inspection which may entitle the high school to a place on the accredited list, but not necessarily retain it there, does not altogether appeal to most high school men. It places too much responsibility upon the high school. The high school principal may be unwilling to assume the responsibility for possible failure in college work, and may, therefore, be very reluctant in the use of his power of certification. Thus many a boy who would have greatly profited by college instruction may fail to secure admission. On the other hand, the high school principal in certain cases may with perfect sincerity be able to certify as to the efficiency of the work done by the pupils in the high school, and express his confidence in their ability to do good work in the college, and yet their college record may not be at all acceptable. It is a fact worthy of note that the record of the students in the college is found to be at great variance with the standing obtained by the student at entrance, either through examination or certification. Students entering with conditions and but reluctantly recommended by the high school principal (not even certified—for some students are admitted in that way), often do extremely well in their college work; while students with excellent records in entering prove to be very poor later. From the very nature of the case, these might be considered as exceptions to the rule, or at least conditioned by certain influences of a peculiar character. Yet it does not seem fair that the high school should be thus debarred from the privilege of a continued representation on the accredited list. Upon the college is to come the responsibility for giving the student such conditions of instruction, and such surroundings in influence and in companionship that ideals of accomplishment shall be instilled, and that he shall be held to perform the tasks required by the college itself.

What is needed is a division of responsibility in which both the college and the high school have a share, but in which the student himself shall have a larger part. There should be placed upon the student himself the responsibility for success, and from the beginning of his high school course until he stands upon the college platform in cap and gown, he should be led to feel that it is he that is to succeed, and that it is upon him alone that the responsibility for success must lie, and that it is by him and by him alone that the rewards of his success are to be reached and enjoyed.

In our eastern section of the United States we have a varied and complex system of higher education. True, we have our state colleges or universities just as they have them in the west. But, with us the state institution is one of many colleges of varied scope and purpose. The fact is that we have many colleges supported by private means which were never intended to educate the children of all the people. They were founded more or less in accordance with the English ideal, and their aims have been intellectual culture and preparation for the speaking and reading professions. Naturally these colleges have a right to choose what sort of education they will offer, and what sort of preparation for their work they will demand. A short time ago an editorial in the "Nation" urged the eastern colleges in the strongest terms, to devote themselves to producing an aristocracy of culture, and in accordance with this ideal to continue entrance examinations, which have proved so effective in excluding all but the brightest and ablest boys. If these colleges want only the pick of the high school graduates, and if they are satisfied and feel sufficiently secure in getting all the students they want, it is their privilege, of course, to get them the best way they can—whether by examination, or by certification based on inspection, or by means of a central certificate board, or any other possible plan. Under these conditions, the high schools cannot in general make any effort to furnish special preparation of any satisfactory nature or for any particular college.

Dr. Brooks, of New England, where, by the way, this situation prevails, says: "From the very nature of things it would seem to indicate that there is but one of two ways open to such colleges. Either they must be small and select, or articulate freely with the high schools. Some are content to be small and select; others are willing to reform. The very fact that some colleges prefer to be small and select is, no doubt,

the best indication of their efficiency. Whatever may be the outcome in this situation, it is certain that some changes will occur in the not distant future".

Not to extend this discussion to undue proportions, we would briefly conclude by saying that while we realize that no method of admission to college has so far been free from objection, yet the certificate method seems to have the strongest arguments in its favor, in so far that it has been almost universally adopted by the colleges of the country.

It is commonly believed that inspection of schools is a necessary element in the proper working out of any certificate system. Associations of colleges throughout the country lay great stress upon the inspection feature. In some of the western states, as has been indicated, inspection by the state university authorities is thorough and valuable.

Again, the inspector from any college who is well equipped for his task, aids the high school principal by pointing out weaknesses in his staff which he may not have suspected, and stimulates the teachers by criticism and advice; all of which, if done in the proper spirit of helpfulness and cooperation, will be greatly appreciated by the high school principal and teachers, and will result in great good to the school. On the other hand the inspector's work if properly carried out, will give the college valuable and reliable information, as to the standards of the school.

Further, it is a recognized fact that the method of state inspection of high schools as conducted by the Department of Education is productive of much good in the standardizing and classifying of high schools.

The high school authorities welcome inspection from any source, provided there are no conflicting tendencies in connection with different aims and purposes of such inspection. But herein lies the difficulty, and thus far no satisfactory system or method of inspection has been devised. Several methods have been suggested. The first is to form an inspection board made up of professors of different colleges, holding each college responsible for the inspection of the schools in its vicinity. For many reasons this plan is not practicable.

The other proposition is to utilize the reports of state inspectors. This looks reasonable, and bids fair to be a step towards the final solution of the problem. It is thus far only in its experimental stage. Whether or not it will be successful in its final working out will depend largely upon the spirit in

which it is undertaken by the different colleges and high schools. The greatest possible harmony and co-operation between the schools and colleges is necessary in the accomplishment of this purpose. This will naturally follow if it is realized that the interests of the one are identical with the other in furthering the cause of good education.

At the suggestion of Chancellor McCormick, it was decided that the discussion of the foregoing papers should not be taken up until after the reading of the remaining papers.

College Inspection by the High School.

John B. Craig, Superintendent of Schools, Beaver, Pa.

Mr. Chairman, Ladies and Gentlemen:

It was my good fortune to be able to attend one of the conferences this morning, and this conference this afternoon, and I am led to the conclusion, trying to put myself in the position of a casual observer, that the chaotic condition of our educational opinions and information was well expressed by the gentleman who said that "education is the science of things we know in terms we do not understand." It seems to me that the subject that has been given me is such a large subject that all I can do is to simply take a small angle of it and speak of that.

It is somewhat trite to say that both high school and college are being at present conducted on a more rational basis than at any other time in our educational history. Efficiency, or ability to get results, is at the present time the controlling testimonial factor in securing for a candidate a position to teach. True it is, a few schools and a few school men are still busy with what is politic, and instead of being governed by a professional and progressive instinct, are making a desperate effort to stay just where they are. It is not a far cry to the time when both college and high school instructors did the work of their departments with as little regard for the difference in the mental operations of their students as though the latter were so many zeros, valuable only when controlled by certain figures given by either the instructor or the text book studied. That a teacher is equipped in scholarship has been until recently his highest claim to priority in the teaching profession. Even yet in many of our high schools and in some of our colleges and universities, the fact that many of our instruc-

tors are mediocre pedagogues is lost in the halo that surrounds their degrees and the name of the colleges from which they come. The doctor who knows medicine, but who is ignorant of its administration, or the lawyer who knows Blackstone without knowing how to plan his case, is as well prepared professionally as the teacher who is well equipped in scholarship but who cannot get results in the class room.

The teacher's pension heralded by certain educational enthusiasts as the only financial panacea for those who have made teaching a stepping stone to something else, and that something else did not develop, has in it a chord which harmonizes with an article written by a so-called professional teacher in the "World's Work" of last year, entitled "Why I am Ashamed of my Profession", all of which means that anybody with an intellectual license in his hand may teach. In order to qualify those entering the teaching profession to do the work incumbent upon their positions, school superintendents have been compelled to spend much of their time during the first few years in training such teachers to do the work they are expected to do their first year. In the trail of this operation are pupils with incorrect mental habits, so developed as may either lead them to leave school altogether, or will cause such a crippled mental condition as will render them unfit in the survival of college work.

Some of our colleges and universities have begun to spell out this fact letter by letter, and have added to their work departments of education in which men and women are qualified by special training to do the greatest work of the nation. This essential department and the character of the work done in it not only qualify for service, but hinder the development of the educational parasite who either wants to teach a year or two to get money for other work, or who wants employment until something better presents itself. If such departments were given proper consideration by teachers, and if our state laws refused licenses to the multitude of teachers who are either blocking the progress of those under their charge or mentally crippling them for life, then the teaching profession would be a profession in reality, the art of teaching would be recompensed by the wages of skilled workmen, and such adventitious growths as the teacher's pensions would be regarded as a useless educational fixture.

It is evident, therefore, that a definite interest and relationship must exist between the college and the high school,

and that the college must assume, under existing circumstances, a very definite responsibility in the equipment of high school instructors, not only that they may be intellectually trained, but that they may be trained pedagogically, and so well trained that they will be able to arrange and present the material found in high school subjects so that it will become a stimulus to the student and consequently a part of his environment to which he can react.

If such a policy is rational it is very evident to the school man, who has done university work, that the first work of the university will begin at home. If I may be allowed a personal testimony, I will make the confession that the greatest scholars, and the weakest teachers, under whom I ever studied were professors in the university, and that the best teachers, but the weakest in scholarship, were to be found in the grades of the public schools. Into the reason for this there is some necessity to inquire. The grade teacher has been closely supervised as to method, as to the raw material out of which he is to make the product, as to the pupil's personal eccentricities, and mental reactions, and if the student fails he feels the responsibility of the failure. To this it may be argued that some pupils may fail for which she is not responsible. I mean to say that the number of pupils who fail under my personal charge as an instructor is a very accurate register of my inefficiency. What is true of the grades of our public schools is also true of our high schools and colleges, and it is, in my opinion, as much of a professional crime for a university instructor to fail in his teaching,—not in his scholarship, but in his teaching,—as it is for a doctor to fail in the administration of his medicine.

The responsibility of the university, in seeing to it that its own instructors measure up to this standard, being removed, it can then see clearly to develop men and women to teach in our high schools and to do it well. Until recently all we have expected to receive from the university for high school work is an individual well equipped on the intellectual side.

The preparation of teachers should be a distinct part of the university work. It plans to develop lawyers, engineers, and doctors. It plans to develop a human product that not only know facts but know how to utilize them in their professions. Why not develop teachers, not by a snap course, which in itself is good, but by a course commensurate with that taken by the doctor or the minister. I maintain this to be a distinct

function of the university, and I further maintain that school superintendents are just now hunting for the product of such a course, and are willing to pay prices commensurate with the quality of the goods received.

The modern university is moving in this direction not only from motives of institutional advancement but from motives of self-preservation. The demand for good high school teachers that has come to the University of Pittsburgh is far in advance of the supply, and the University of Pittsburgh is among the leaders in this department of university work.

From another angle of vision an inspection of colleges and college methods leads the high school to criticise the college because it does not keep in closer touch with the student in his habits of study or habits of life. In reply to this criticism it may be argued that such is impossible, that the student is being trained for actual life service, and that he must feel his own responsibility. Although these arguments seem on the surface plausible, yet it is a fact that if our high schools did not supervise his work carefully and did not fortify the student against many of the difficulties he meets he would fail, and such a failure is in many cases a pretty certain gateway to his rating and success in life. Not that a student should have his problems solved for him, nor that the instructor should surmount the obstacles and remove the obstructions from the road the student must travel, but that when he meets these difficulties he may not be left to his own immature powers to fail. The greatest asset of the small college is the close relationship between its instructors and students, and the average high school graduate has a better chance in the small college to develop into what I want my son to become, because he does not suffer the results of a great transition which presupposes judgment and strength of character found in only a few men. Our biggest commercial plants are most careful of their efficiency, and are most persistent in using the by-products and in stopping the leakage.

In these great factories every possibility of the raw material is brought to the surface and utilized. Our educational institutions could well sit at their feet and learn; and when we have learned what they can teach us, when we have in our teaching force, both in the university and high school, men and women properly disposed and capable of getting the best from each student all the time, we will have reached an efficiency of service which our nation has a right to demand of us. Then

the development of the student, and of every student, will be sought first, and the force and power of the university will be utilized in the educational salvation of the lad who has hitherto dropped out of school and joined the ranks of the unprepared. After this is done, an interest in abstract philosophy will be added if necessary.

A reflection of the past tendency on the part of colleges and universities to make a curriculum primary and the student secondary has been strikingly evident in our college entrance requirements. High schools have been required to measure up to the college instead of the college coming to the high school conditions. This tendency is rapidly disappearing. Why has this condition existed? Chief of the many reasons which enter into the answer of this question was that great attention was placed on the goal to be reached, and less attention given to the lad who was doing the running or to the road on which he had to travel. The life he had to live has not seemed as important as the classics he was expected to master. But the cone will not stand on its apex because the law of gravitation does not operate upward. We must meet the conditions of life in which men and women are to live. High schools are planning their curricula to do this. First, because it is rational. Education is a process of getting habits, and a habit is a coordination in the nervous system that is ready to express itself when the appropriate stimulus is presented. If our environment is made up of all the stimuli to which we react, then education is the process of getting an environment. The social and industrial conditions will, in a large sense, determine what our high school curriculum is to be. Many students who pass through high school do not attend college, and during their high school course must receive the development which will give them the maximum of ability for the time spent. This does not coincide with college entrance requirements as announced by our college boards. As a result our high schools are necessitated to maintain at least two distinct courses, one for those who intend to enter college, and one for those who are either unable or indisposed to do so.

If the spirit of mutual interest in students, not in courses, which seems to be bringing the college and the high school together, continues, and it ought to continue, we will have reason to hope for a time when educational system will approach our industrial systems in efficiency, and we will be able to de-

velop what there is in the boy without blindly trying to make of him what he was not intended to become.

College Inspection by the High School.

Discussion.

Bela B. Smith, Assistant Principal, Connellsville High School.

Mr. Chairman:

In discussing this question it is well for us to fix in our minds the positions of the high school and of the college in an educational scheme. If each is an independent unit, an isolated institution, with no established relationship to the other, there can be no reason for or justification of any investigation of one by the other. But if, on the other hand, there is a mutual relationship existing between the two, if each is a part of an educational system, a step in an educational series, a link in an educational chain, then study and investigation of one by the other is not only justifiable but imperative.

I believe we all accept the latter view and recognize in the high school and the college closely associated parts of an educational system; and we know that in the system the college follows the high school and receives practically all of its pupils from it, while the school precedes the college and sends some of its pupils to the college. It follows logically from this that the school should do all it possibly can to fit its pupils for the college, and by the same process of reasoning we are driven to the inevitable conclusion that the college should prepare to take care of the pupil who has successfully completed an efficient four year high school course.

Who is to decide what constitutes an efficient high school course? The high school principal prepares a course of study, faintly hoping that it may be an acceptable compromise, and that all may find it a course fitted for their needs. What are the results? A practical business man with a boy ready to enter high school visits the school and inquires about the course of study. He intends to have his boy finish the high school course and then enter the business world. He looks over the course and says it will not do; for as his boy is not to be an undertaker, four years' experience with dead and dying subjects will be of no value to him. Then a request for an outline of the course of study comes from a college; the request is complied with, and the course of study is submitted for ex-

amination to some scholarly member of the faculty. What is the verdict this time? The condemnation is much more sweeping than in the case of the business man; for in the mind of the scholarly man the course is not fitted for the present, would certainly not have been suited to the generations now dead, and can find a place only with generations yet unborn, which he fervently hopes never will be born.

Each of these views, while reasonably conservative from the standpoint of the one advancing them, is decidedly extreme when considered from the viewpoint of the composite high school pupil; for no difference what our personal views may be, we cannot ignore the fact that the primary business of the high school is not to prepare pupils for college, neither is it to prepare pupils for any particular vocation, to the exclusion of all others; but it is to be the chief fitting school above the grammar grade for the great majority. If the high school is to do its real work and do it well, it must recognize its proper function, get on to a proper basis, and firmly maintain that basis; and it is the duty of the college to aid in every way possible the high school in its efforts to perform its proper functions.

The college has done a great deal for the high school in one way. It has saved it from going to one extreme. In many parts of the country high schools have been strengthened by a system of inspection by a representative of some particular college. At the suggestion of the inspector subjects have been added to the course of study; the methods of presenting others have been changed; still others have been changed as regards the time they are given in the course. Still other colleges that have no inspectors in the field, through their catalogs and bulletins have given suggestions that have aided the scholars; and all the colleges, by laying down certain requirements which the prospective student must meet in order to enter college, have at least saved the high schools from responding to every suggestion for popularizing the courses.

But while the colleges have been saving the high schools from one extreme, they have required the schools to be so very orthodox that their orthodoxy has become extreme. The schools have accepted and acted upon the suggestions of the college; and in so doing they have made necessary many apologies to pupils and parents. The limit has been reached, and the schools are unable to longer require the same things they

once did; with the result that in some places the course has been changed, and the college is dissatisfied, while in other places the course remains the same, while the pupils either do not enter high school, or else enter and soon drop out; and in this instance the community is dissatisfied with its school.

If men were made for high schools and colleges we could ignore the dissatisfaction of the people and insist that all unite in glorifying the ideals born in the colleges and heretofore nurtured by the schools. But since high schools and colleges were made for men, it is their duty as well as the duty of all other educational agencies to give to men what they most desire and need.

The high school has been inspected, it has been advised and directed by the colleges, and has responded promptly and done all it possibly can to convince the people in the different communities that they really want what the educational theorist says they want and need. In some instances the people have been convinced and believed; in other instances they have accepted grudgingly; while in still others they refuse to believe in or accept the theories we propose. What is the high school to do? There is to my mind but one answer to this question. If the people do not want what the school offers, the school must offer what they want; but by so doing it finds itself in many instances unable to offer what the college, the next step in the educational series, wants, and many are thereby prevented from taking this very important step.

For some reason or other there are very few scholars in this world, and what few there are have been carefully segregated and placed on college and university faculties, with the result that the high school finds itself flanked on the one side by ordinary men, of which there are so many, and on the other by scholars, of which there are so few. And since inspection and guidance by the few has saved the high school from the extremes of the many, is it presumptuous on the part of the school to suggest that a little inspection on its part given in the same spirit as that given by the colleges, might save the colleges to the high schools and to themselves from the extremes of the few?

In the first place, the schools might convince the colleges that there is no sharply drawn line of demarcation between school and college on one side of which all work is indelibly stamped school work, while on the other side it is forever classed as college work. The schools might, after studying the

colleges, convince them that some of the work heretofore considered exclusively college work could be attempted without undue presumption by the schools, and that some of the work ordinarily classed as school work could in some instances be done by the college without a total sacrifice of dignity.

The schools could, I believe, after a careful study of what the different colleges propose to give and what they require, in conjunction with the college work out a reasonable and uniform standard to be attained by the schools and accepted by the colleges; and thereby make it unnecessary for the high school pupil to know definitely early in his high school course what particular college he expects to attend.

The schools could also, I think, after an investigation of the colleges convince them, using the evidence that could be collected in the investigation, that the ability of the college is not so limited as the school is led to believe; and that instead of being able to do work worthy of consideration only when the student is prepared along rigid, narrow lines, they could be shown that they could build successfully on any good foundation. Again, the school on inspection might perhaps find that some of the things so persistently demanded by the colleges are not absolutely essential, but simply desirable, and could be given by the college with less sacrifice of something else than they could by the school.

These are a few thoughts concerning the inspection of colleges by high schools as they occur to me. To some they may not seem safe; to others they may seem not even sane; while to others they may suggest a domination of the college by the high school in the future as the school has been in a measure dominated by the college in the past.

But think as you may, you cannot escape the fact that both the school and college were made for men, and are not fulfilling their highest mission if they fail to minister to man's educational needs. Furthermore, we know that individually and collectively the school and college can both be improved, and any movement that will make either or both more efficient in their joint work should be welcomed by both school and college, regardless of whether it comes from the school or from the college, or whether it is called domination or inspection or what you will.

College Inspection by the High School.

Discussion.

Edward Rynearson, Director of High Schools, Pittsburgh, Pa.

Mr. Chairman, Ladies and Gentlemen:

I certainly wish to express my appreciation of what the university has done for the secondary schools, and I want to express it publicly. That is not my subject, but I cannot refrain from expressing to the Chancellor and other members of the University Faculty who have worked so hard and so faithfully and successfully in the arranging of this excellent program that we have had here during these three days.

I cannot begin the discussion of this subject without referring to the first paper of the afternoon, in which the third method of inspection involved some such rule as this—that no teacher was to teach more than twenty-five periods per week, and that they were not to have more than thirty scholars in a class. I think that is along the right line. I think this exception should be made, however. In the first place, I do not think all teachers should be required in high schools to teach twenty-five periods a week. I think this exception should be made of any amount of required periods or minimum periods of the average teacher; that the teacher of English should not be permitted, or the certificate should not be accepted from schools where the teacher of English has more than one-half the number of periods from teaching; and if possible that his class in English should be less in number than the classes in other subjects. I do not teach English, and so I may be pardoned for making that remark. But the teacher of English has, in my opinion, the hardest work even with one-half the number of recitations of any teacher in any secondary school.

This subject this afternoon appealed to me when I first read it. "College Inspection by High Schools": that we should expect to visit colleges and find out from our visit of inspection whether or not we would recommend certain colleges to our high school pupils. Perhaps that is not the object of the discussion, but I am not sure that it might not be a pretty good object. It might be a pretty good idea to have the principals of our high schools, and others, visit some of the colleges, and determine whether or not we would recommend these colleges to our patrons. For our patrons do come to us and ask: "Where shall I send my son or my daughter"; and we should be able to answer these

questions, or at least to discuss them intelligently. There are some things that are right in this line. In the first place, if a boy is intending to take up scientific subjects, if he is going to make science his life work, we want to be able to advise him where he will have the best equipment. I can give you the name of a college I visited a short time ago that has a course in physics and another in chemistry; and there is not a gas flame in the chemical laboratory, nor running water in the chemical laboratory; yet they offer a course in chemistry in that college, and grant a degree. Nearly the same thing is true in the case of physics; yet they offer in each of those subjects in that particular college, courses leading to a degree. Would the principal of a high school who knows those conditions permit one of his pupils to enter a college of that kind; a student who is going to make biology his specialty, or enter a work where chemistry would be a material subject?

Then as to the equipment in teachers. There are many of our larger institutions that have in their faculties some excellent men, scholars in the broadest sense; and yet they let some of their students who are holding scholarships take care of the work of the first year, with the freshmen. Then they wonder why there is such a mortality during the freshman year of the college. There is an equipment in apparatus, and an equipment in teachers, that should determine where we shall send our boys and our girls.

And then there is that moral environment, and the social environment, that should determine in many cases the college of the boy especially. I know there are colleges, and you know there are colleges, where you would not want your boy or your brother to go, because of the moral atmosphere. You would not want him to go where many of our boys do who enter the colleges, at seventeen and eighteen, though it might be all right when he is twenty or twenty-one, when his character is sufficiently formed, when he can withstand certain subtle temptations which surround the young men of those particular colleges. There are some of our boys and girls who should go to the ultra-classical college. I was glad to hear the statement made that colleges should be differentiated, the same as some of our other schools are differentiated. I say that certain boys and certain girls should be sent to the ultra-classical school, and that others should not go there.

I think all of our boys and girls in the last year in high school should read that book of Canfield on the college student

and his instructor. I judge all of you who are here this afternoon have read that book, and know how he discusses the many problems that come up in the boy and girl in the last year of high school.

Now the discussion this afternoon is not intended to array the high school against the college; because any man who has studied and understood the high school problem and has watched the growth of the high school in the last twenty years, has noticed the improvement that has been made in raising the standard of our high schools, and appreciates at once that much of this is due to the attitude that the colleges have taken toward the high school. Much credit is due to the colleges for the way in which they have outlined the work in which they wish to have the pupil prepared before he enters college. And so while we may find fault with the college, we cannot fail to notice the great good that has come to the high school through the influence, or, if you want to put it that way, the domination of the college. I prefer not to call it domination, because it should be considered as mutual co-operation, if I may use the double expression.

Then another way in which we may inspect the college is through the reports that come to us and should come to us from the college. Then we think you are meddling with our affairs or trying to dictate the kind of course of study that should be offered to our high school pupils! We welcome the reports that come from the colleges to which our boys and girls go. We are receiving them now in our own high school, as the other high school men are, from the colleges to which our boys and girls have gone, and we are pleased in some ways. We are gaining some information, and I think that, on the whole, it is going to have a beneficial effect on our work and on the work of the pupils.

Then another thing, we will get some comments from these colleges—and we want them—on our general program of study, and upon the general preparation of our teachers. I am not sure that the colleges should ask quite so many questions as one girl's college asks in regard to the preparation of a girl that entered that particular college. I think of all the persnickety questions, if that is a good word, that have ever been asked, this one girl's college in particular asks the worst about candidates who want to enter college. I do not wonder that we hear some reports from the girls after they get to this particular college.

From these different colleges and their requirements it may be possible for us to modify our courses to accommodate our pupils, when a number of pupils want to enter a certain kind of work in these colleges. In our own high school in the last few years, we have put in four years of mathematics which includes trigonometry and algebra, for those pupils who intend to continue work in engineering. And we have enough pupils who are taking that to form a large division of forty or forty-five pupils in that line of mathematics—and they are not taking these courses because they are snap courses.

Then another way in which we may profit from the inspection of the colleges is that the requirements for admission should be published or at least given to the members of our senior class, and if published, should be sent to the parents of those pupils, so that the parents may know exactly what the college requires, and will be able to select the college with the pupil, or consult with the principal in regard to these different colleges. Professor Hanus in his book on "Aims in Education" gives three aims, as you know, of the secondary education. I cannot give you all of those. I simply remember a part of the third. The third aim of secondary education is to train the young men and the young women that they may lead a useful and happy life; useful not in the sense of the utilitarian idea alone, but in the sense that they may be useful not only to their own friends and family, but useful in the community in which they live; and that they may be happy not only in their vocations, but in their leisure.

That is the common problem, and as I said here this afternoon, let us discuss that common problem in the territory of each other, both college men and secondary school men. They are both interested in the boys and girls, the future man and woman, not only for the sake of the vocation that they may take up, but for the way in which they may spend their leisure moments. These are the danger moments. Likewise, they may be the moments of the greatest value to them in their life in the community.

George Hutchinson, Assistant Professor of Psychology and Education, Carnegie Technical Schools:

I listened to the discussion this morning and this afternoon; and I have noticed a wonderful difference in the value of vocational training in the secondary schools. I believe we

have gotten to the place where something definite needs to be done. We have the opinion of the Dean of the University of Minnesota, and we had the opinion this afternoon of the President of that University. I happen to be acquainted with some of the members of the faculty there, and I have a different opinion from them, as to the value of vocational training. Would it not be possible for the colleges of our state to keep some record of the standing of their students the first year, or the first half year, such as the University of California is doing; and out of that might we not get at something more than judgment or opinion as to the value of training which the student gets in the vocational high school, as compared with the value of the training the student gets in the classical high school, and the training the student gets in the so-called scientific high school? It seems to me that we have come to a place where we must decide whether vocational training is to be an integral part of our regular high school, or whether the student must determine upon entering high school, whether he is to limit his work to the high school alone; and the only way we can do it is by getting at some definite figures of that sort.

Chairman Oliver:

There seems to be no desire to indulge in any further discussion. In closing it may be well to state that as a representative of a portion of our school system which might be called the business side, we recognize that there is a general trend which is distinctly visible toward a greater degree of uniformity, a greater extent of what might be called standardizing the educational system so far as the public schools, the elementary schools, the high schools, the colleges and the universities of the state are concerned. We feel that they should work into each other, and we know that they are working into each other to a very much greater degree and to a very much greater extent than they did formerly, and that that tendency toward what might be called standardizing is on the increase, that it is desirable, that people expect it, and that people are entitled to it, because it is the people in the long run who support and sustain all our educational institutions. In this process the technical school men have responsibilities which they should realize to the full, in this, that it belongs to them, and not to the business side of the school system,—it belongs to the educational side, the school room side, the teaching side

of the public school system, the colleges and the universities, to so arrange among themselves that greater uniformity may be accomplished with as little loss of time as possible on the part of the scholar, or of money on the part of the centers that furnish the money. It is to the school side, those in charge of the school room and those in charge of the technical educational side on whom this entire responsibility rests. And when the public feel that they have accomplished this, all the funds that are necessary will be willingly supplied.

Chancellor McCormick:

If there is no further business, Mr. Chairman, I shall say just a word in conclusion. We have especially enjoyed this conference of secondary school men. We are glad that the conference could be held at a time when the college presidents of the Commonwealth could also be in attendance. We regret, as many of you do, the conflict with the superintendents' meeting in St. Louis. This, of course, we could not avoid. We tried to have that meeting take place in Pittsburgh in connection with our own exercises. Failing in that, we had to accept the situation, with the result that we have fewer of our secondary school people in the western part of the state than we would otherwise have had.

I am glad, however, that, as a sort of compensation, we have the presidents of practically all the colleges in the state in attendance this forenoon, many of them this afternoon, and that results will be reached by reason of this co-operation otherwise impossible. By sympathetic co-operation the secondary school men and the college men will work out the problems concerned with these two parts of our educational system.

Again I wish to say, Mr. Chairman, that we have enjoyed these three anniversary days. The inspiration of this remarkable gathering will not soon disappear. I have had the good fortune to participate in many of these conferences in different parts of the country, in connection with anniversary and inauguration exercises, and I remember none more full of good things than the conferences of the last three days. I think, too, that those who have honored us in Pittsburgh with their presence, have equalled, perhaps surpassed, in number, those of any other similar gathering. We have appreciated it very much. We have been helped and benefited by what we have

heard; and while we cannot promise to repeat the one hundred and twenty-fifth anniversary with any degree of frequency, we do promise to give the opportunity for these conferences—the conferences of the secondary schools and the colleges in Western Pennsylvania—with the result, I trust, that they will be a very great blessing and benefit to the school system of our Commonwealth.

I am especially pleased that our youngest alumnus has presided at this meeting this afternoon. I take this opportunity to say, as I have privately said to him, that there is no man in the Commonwealth who has devoted himself more assiduously, more earnestly, more efficiently to our public school system, than has David B. Oliver, who is now Dr. Oliver. I am very glad that at this concluding session of our great series of anniversary exercises, it has been our privilege to have him as our presiding officer.

With the dramatic and musical entertainment this evening, the series of exercises will come to a conclusion. I thank you personally for your attendance, and I trust that so far as this secondary school conference is concerned, we shall have many of you present with us year by year in the future.

A vote of thanks was extended to the University of Pittsburgh for its hospitality.

The final event of the three days' celebration was the entertainment given on Thursday evening by the musical and dramatic clubs of the University, in the auditorium of the Soldiers' Memorial. The excellent work of the clubs met with a cordial reception from the large audience.

DELEGATES

FROM INSTITUTIONS IN FOREIGN COUNTRIES

1411 **UNIVERSITY OF ST. ANDREWS**
Andrew Carnegie, LL.D., Ex-Lord-Rector
Represented by Samuel Harden Church, M.A., Litt.D., LL.D.

1450 **UNIVERSITY OF GLASGOW**
William Robert Lang, D.Sc., F.R.S., F.I.C., Alumnus
Herbert Charles Sadler, D.Sc., Alumnus
Robert Mark Wenley, M.A., D.Sc., LL.D., Alumnus
Norman Smith, M.A., Ph.D., Alumnus

1494 **UNIVERSITY OF ABERDEEN**
Andrew Carnegie, LL.D., Lord-Rector
Represented by Samuel Harden Church, M.A., Litt.D., LL.D.

1559 **UNIVERSITY OF GENEVA**
William Emmanuel Rappard, Litt.D., D.Jur., Alumnus

1583 **UNIVERSITY OF EDINBURGH**
Andrew Carnegie, LL.D., Honorary Alumnus
Represented by Samuel Harden Church, M.A., Litt.D., LL.D.

1811 **ROYAL FREDERIK'S UNIVERSITY OF CHRISTIANA**
Torstein Jahr, A.B., Alumnus

1821 **McGILL UNIVERSITY**
William Peterson, LL.D., Principal and Vice-Chancellor
Oscar Klotz, M.B., M.D., C.M., Alumnus

1821 **NATIONAL UNIVERSITY OF BUENOS AIRES**
Doctor Romulo S. Naon, Director and Professor of Constitutional Law. Envoy Extraordinary and Minister Plenipotentiary from Argentina

1827 **UNIVERSITY OF TORONTO**
Norman McLean Duncan, Alumnus

1845 **QUEEN'S UNIVERSITY, BELFAST**
Hon. Edward J. McDermott, LL.B., Alumnus

1851 **VICTORIA UNIVERSITY, MANCHESTER**
J. A. Dewe, M.A., Alumnus

1860 **ROBERT COLLEGE, TURKEY**
George Washburn, D.D., LL.D., Ex-president

1863 **SYRIAN PROTESTANT COLLEGE**
Carl Fox, A.B., Former Instructor
Stephen Dows Thaw, A.B., Former Instructor

1893 **UNIVERSITY OF WALES**
Isabel Maddison, B.Sc., Ph.D., Alumnus

FROM INSTITUTIONS IN THE UNITED STATES

1636 HARVARD UNIVERSITY
Ira Nelson Hollis, A.M., L.H.D., Professor of Engineering
Percival James Eaton, M.A., M.D., Alumnus

1693 COLLEGE OF WILLIAM AND MARY
Lyon Gardiner Tyler, A.M., LL.D., President

1696 ST. JOHN'S COLLEGE
Thomas Fell, Ph.D., LL.D., D.C.L., President

1701 YALE UNIVERSITY
Charles Felton Scott, M.A., Professor of Electrical Engineering, Sheffield Scientific School

1740 UNIVERSITY OF PENNSYLVANIA
Edgar Fahs Smith, Ph.D., Sc.D., L.H.D., LL.D., Provost
A. Duncan Yocum, Ph.D., Professor of Pedagogy

1746 PRINCETON UNIVERSITY
John Grier Hibben, M.A., Ph.D., LL.D., President
Malcolm MacLaren, E.E., A.M., Professor of Electrical Engineering.

1749 WASHINGTON AND LEE UNIVERSITY
Henry Donald Campbell, M.A., Ph.D., Dean

1754 COLUMBIA UNIVERSITY
Frederick Paul Keppel, A.B., Dean of Columbia College
James M. Clark, LL.B., Alumnus

1764 BROWN UNIVERSITY
Albert Davis Mead, A.M., Ph.D., Professor and Head of the Department of Biology
Allan H. Willett, A.B., Ph.D., Alumnus

1766 RUTGERS COLLEGE
William Henry Steele Demarest, D.D., LL.D., President

1769 DARTMOUTH COLLEGE
Ernest Fox Nichols, Sc.D., LL.D., President
Herbert Darling Foster, Litt.D., Professor of History

1776 HAMPDEN-SIDNEY COLLEGE
Henry Tucker Graham, A.B., President
Robert B. Woodworth, B.A., Alumnus

1782 WASHINGTON COLLEGE
James William Cain, A.M., LL.D., President

1783 DICKINSON COLLEGE
Eugene Allen Noble, D.D., L.H.D., President

1784 NEW BRUNSWICK THEOLOGICAL SEMINARY
Edward Payson Johnson, M.A., D.D., Professor of Church History and Church Government

1785 UNIVERSITY OF GEORGIA
Charles Mercer Snelling, A.M., Dean

1787 FRANKLIN AND MARSHALL COLLEGE
Henry Harbaugh Apple, A.M., D.D., President

1793 WILLIAMS COLLEGE
Harry Augustus Garfield, LL.D., President
Asa Henry Morton, L.H.D., Professor of Natural Theology

1800 MIDDLEBURY COLLEGE
Edwin L. Allen, A.B., Alumnus

1802 WASHINGTON AND JEFFERSON COLLEGE
James David Moffat, D.D., LL.D., President
William Craig McClelland, A.M., Litt. D., Professor of English Language and Literature

1804 OHIO UNIVERSITY
Hiram Roy Wilson, Litt.D., Professor and Head of the Department of English

1812 HAMILTON COLLEGE
Hon. Charles P. Orr, LL.D., Alumnus

1812 THEOLOGICAL SEMINARY OF THE PRESBYTERIAN CHURCH AT PRINCETON
John D. Davis, Ph.D., D.D., LL.D., Professor of Oriental and Old Testament Literature

1815 ALLEGHENY COLLEGE
William Henry Crawford, A.M., DD., LL.D., President

1819 COLGATE UNIVERSITY
B. H. Pettes, A. B., Alumnus

1819 UNIVERSITY OF VIRGINIA
Adolphus Leo Weil, Esq., Alumnus

1820 AUBURN THEOLOGICAL SEMINARY
George Black Stewart, D.D., LL.D., President

1820 INDIANA UNIVERSITY
Jesse Hays White, A.M., Ph.D., Alumnus

1821 AMHERST COLLEGE
George Gilbert Pond, Ph.D., Alumnus

1822 CENTRAL UNIVERSITY OF KENTUCKY
Frederick William Hinitt, A.M., Ph.D., D.D., President

1823 TRINITY COLLEGE, HARTFORD
Hon. Joseph Buffington, Alumnus

1824 KENYON COLLEGE
William Foster Peirce, A.M., L.H.D.. D.D., President
Rev. William Thompson, Alumnus and Trustee

1825 FRANKLIN COLLEGE
Anthony L. Nixon, B.D., Ph.D., Professor of Philosophy

1825 NEWTON THEOLOGICAL INSTITUTE
George Edwin Horr, D.D., President

1825 THEOLOGICAL SEMINARY OF THE REFORMED CHURCH IN THE UNITED STATES
John M. Evans, Member of the Board of Visitors

1825 WESTERN THEOLOGICAL SEMINARY
James A. Kelso, Ph.D., D.D., President

1825 ALLEGHENY THEOLOGICAL SEMINARY
David A. McClenahan, D.D., LL.D., Professor of Old Testament Literature and Criticism

1826 WESTERN RESERVE UNIVERSITY
Charles F. Thwing, D.D., President
Samuel Ball Platner, Ph.D., Professor of Latin

1829 HANOVER COLLEGE
William A. Stanton, Ph.D., D.D., Alumnus

1829 McCORMICK THEOLOGICAL SEMINARY
Frank Woolford Sneed, D.D., Alumnus

1830 NEW YORK UNIVERSITY
Henry Mitchell MacCracken, D.D., LL.D., Chancellor Emeritus

1830 OXFORD COLLEGE FOR WOMEN
Jane Sherzer, A.M., Ph.D., President

1832 LAFAYETTE COLLEGE
Ethelbert D. Warfield, D.D., LL.D., President
Francis A. March, Jr., A.M., Ph.D., Professor of the English Language

1832 PENNSYLVANIA COLLEGE
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William K. T. Sahm, M.D., Alumnus

1833 HAVERFORD COLLEGE
Isaac Sharpless, Sc.D., LL.D., L.H.D., President

1834 TULANE UNIVERSITY OF LOUISIANA
John A. Fox, Commissioner-at-large for the Panama-California Exposition

1834 HARTFORD THEOLOGICAL SEMINARY
Edward W. Capen, Ph.D., Lecturer on Sociology

1835 MARIETTA COLLEGE
Alfred Tyler Perry, A.M., D.D., President

1836 ALFRED UNIVERSITY
Boothe Colwell Davis, Ph. D., President

1836 UNION THEOLOGICAL SEMINARY
Francis Brown, A. M., Ph.D., D.D., Litt.D., LL.D., President

1837 UNIVERSITY OF MICHIGAN
Robert Mark Wenley, M.A., D.Sc., Ph.D., LL.D., Professor and Head of the Department of Philosophy

1837 MOUNT HOLYOKE COLLEGE
Helen M. Searles, Ph.D., Professor of Latin Language and Literature

1839 UNIVERSITY OF MISSOURI
Charles Claude Guthrie, B.S., M.D., Ph.D., Alumnus

1840 BETHANY COLLEGE
Thomas E. Cramblet, A.M., LL.D., President
Philip Johnson, A. M., Professor

1842 OHIO WESLEYAN UNIVERSITY
Herbert Welch, A. M., D.D., LL.D., President
Edward Rynearson, M.A., Alumnus

1842 UNIVERSITY OF NOTRE DAME
The Very Reverend John Cavanaugh, C.S.C., D.D., President

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1846 BELOIT COLLEGE
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1846 BUCKNELL UNIVERSITY
John Howard Harris, Ph. D., LL.D., President

1846 MOUNT UNION COLLEGE
William Henry McMaster, B.S., M.A., D.D., President

1846 UNIVERSITY OF BUFFALO
Frederick C. Busch, B.S., M.D., Professor of Physiology

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1847 GRINNELL COLLEGE
John Hanson Thomas Main, Ph.D., LL.D., President

1847 OTTERBEIN UNIVERSITY
Walter G. Clippinger, A.B., B.D., D.D., President

1847 ROCKFORD COLLEGE
Mrs. Lewis Clyde Bixler

1847 STATE UNIVERSITY OF IOWA
Charles R. Rall, C.E., Alumnus

1848 UNIVERSITY OF WISCONSIN
George Cary Comstock, Ph.B., Sc.D., LL.D., Director of the Graduate School

1851 NORTHWESTERN UNIVERSITY
Jesse Jay Shuman, Ph.B., Alumnus

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Robert Barner, Professor of German

1853 WASHINGTON UNIVERSITY
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1854 WESTERN COLLEGE FOR WOMEN
John Grant Newman, A.M., D.D., President

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William Goodell Frost, A.M., Ph.D., D.D., LL.D., President

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Brayman William Anthony, D.D., LL.D., President

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David S. Bissell, S.B., Alumnus

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Mrs. Mary Thaw Thompson, A.B., Alumna, Trustee

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Benjamin Franklin Faunce, B.S., Alumnus

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Henry Sturgis Drinker, E.M., LL.D., President

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Robert Kennedy Duncan, A.B., Director of Industrial Chemical Research, University of Kansas and University of Pittsburgh

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Alfred Jarrett Hare, A.M., Registrar

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Loyall A. Osborne, M.E., E.E., Alumnus

1868 UNIVERSITY OF WOOSTER
Louis Edward Holden, D.D., LL.D., President

1868 WELLS COLLEGE
Louis F. Snow, Ph.D., Professor of Philosophy and Pedagogy

1869 PENNSYLVANIA COLLEGE FOR WOMEN
Henry D. Lindsay, D.D., President
Lucia Becker, M.A., Dean

1869 PURDUE UNIVERSITY
Charles Henry Benjamin, M.E., Dean of the Schools of Engineering

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John B. Booth, A.B., Alumnus

1869 UNIVERSITY OF MINNESOTA
Lyman L. Pierce, B.A., Alumnus

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George Leslie Omwake, A.M., Ph.D., Vice-President

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Augustus Byington Church, A.M., D.D., LL.D., President

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Fred H. Ottman, A.B., A.M., Alumnus
Calvin N. Wenrich, A.M., Ph.D., Alumnus

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William Oxley Thompson, D.D., LL.D., President

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Verner Simpson Gaggin, Ph.B, M.D., Alumnus

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C. Theodore Benze, D.D., President
Franklin B. Sawvel, Ph. D., Professor

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Guy Allan Tawney, Ph.D., Professor of Philosophy

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Anna Jane McKeag, Ph.D., President

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Charles Alexander Cockayne, A.M., Ph.D., President

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James Hampton Kirkland, A.M., Ph.D., LL.D., Chancellor

1873 SOUTHWESTERN UNIVERSITY
Charles McTyeire Bishop, A.M., D.D., President

1874 COLORADO COLLEGE
William F. Slocum, D.D., LL.D., President

1874 COLORADO SCHOOL OF MINES
Stephen Lincoln Goodale, Ph.B., E.M., A.M., Alumnus

1875 PARK COLLEGE
Rev. B. E. P. Prugh, D.D., Alumnus

1875 WELLESLEY COLLEGE
Anna Jane McKeag, Ph.D., Ex-Associate Professor of the History and Principles of Education

1876 JOHNS HOPKINS UNIVERSITY
David M. Robinson, Ph.D., Associate Professor of Classical Archæology

1876 JUNIATA COLLEGE
I. Harvey Brumbaugh, A.M., President

1876 LAKE FOREST COLLEGE
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